

TNF-gamma

1 CCCAATCAAGAGAAATTCCATACTATCACCAGTTGGCCGACTTTCCAAGTCTAGTGCAGA 60
 61 AATCCAAGGCACCTCACACCTAGAGTTCTATACCTCTGAGACTCCAGAGGAAAGAACAA 120
 121 GACAGTGCAGAAGGATATGTTAGAACCCACTGAAAACCTAGAAGGTTGAAAAGGAAGCAT 180
 181 ACCCTCCTGACCTATAAGAAAATTTTCAGTCTGCAGGGGGATATCCTTGTGGCCCAAGAC 240
 241 ATTGGTGTTCATTGACTAAGAGGAAATTATTTGTGGTGAGCTCTGAGTGAGGATTAG 300
 301 GACCAGGGAGATGCCAAGTTTCTATCACTTACCTCATGCCCTGTAAGACAAGTGTTTTGTT 360
 361 CCAATTGATGAATCGGGAGAAAACAGTTCAGCCAATCACTTATGGGCACAGAATGGAATT 420
 421 TGAAGGGTCTGGTGCCTGCCCTTGTACATACGTAAACAAGAGAGGCATCGATGAGTTTTAT 480
 481 CTGAGTCATTTGGGAAAGGATAATTCTTGCACCAAGCCATTTTCCTAAACACAGAAGAAT 540
 541 AGGGGGATTCCCTTAACCTTCATTGTTCTCCAGGATCATAGGTCTCAGGATAAATTAAAAA 600
 601 TTTTCAGGTCAGACCACTCAGTCTCAGAAAGGCAAAGTAATTTGCCCCAGGTCCTAGTC 660
 661 CAAGATGTTATTCTCTTTGAACAAATGTGTATGTCCAGTCACATATTCTTCATTCAATTCC 720
 721 TCCCCAAAGCAGTTTTTAGCTGTTAGGTATATTCCGATCACTTTAGTCTATTTTGAAAATG 780
 781 ATATGAGACGCTTTTAAAGCAAAGTCTACAGTTTCCCAATGAGAAAATTAATCCTCTTTC 840
 1 M R R F L S K V Y S F P M R K L I L F L 20
 841 TTGTCTTTCCAGTTGTGAGACAAACTCCCACACAGCACTTTAAAAATCAGTTCCCAGCTC 900
 21 V F P V V R Q T P T Q H F K N Q F P A L 40
 901 TGCCTGGGAACATGAACTAGGCCTGGCCTTCACCAAGAACCGAATGAACTATACCAACA 960
 41 H W E H E L G L A F T K N R M N Y T N K 60
 961 AATTCCTGCTGATCCCAGAGTCGGGAGACTACTTCATTTACTCCCAGGTCACATTCCGTG 1020
 61 F L L I P E S G D Y F I Y S Q V T F R G 80

FIG. 1A

TNF- γ

1021	GGATGACCTCTGAGTGCAGTGAAATCAGACAAGCAGCGCCGACCAAACAAGCCAGACTCCA	1080
81	M T S E C S E I R Q A G R P N K P D S I	100
1081	TCACTGTGGTCATCACCAAGGTAACAGACAGCTACCCTGAGCCAACCCAGCTCCTCATGG	1140
101	T V V I T K V T D S Y P E P T Q L L M G	120
1141	GGACCAAGTCTGTATGCCAAGTAGGTAGCAACTGGTTCCAGCCCATCTACCTCGGAGCCA	1200
121	T K S V C E V G S N W F Q P I Y L G A M	140
1201	TGTTCTCCTTGCAAGAAGCGGACAAGCTAATGGTGAACGTCAGTGACATCTCTTTGGTGG	1260
141	F S L Q E G D K L M V N V S D I S L V D	160
1261	ATTACACAAAAGAAGATAAAACCTTCTTTGGAGCCTTCTTACTATAGGAGGAGAGCAAAT	1320
161	Y T K E D K T F F G A F L L *	175
1321	ATCATTATATGAAAGTCCTCTGCCACCGAGTTCCTAATTTTCTTTGTTCAAATGTAATTA	1380
1381	TAACCAGGGGTTTTCTTGGGGCCGGAGTAGGGGCCATTCCACAGGGACAACGGTTTAGC	1440
1441	TATGAAATTTGGGGCCAAAATTTCACTTCATGTCCCTTACTGATGAGAGTACTAACTG	1500
1501	GAAAAAGGCTGAAGAGAGCAAATATATTATTAAGATCGGTTGGAGGATTGGCGAGTTTCT	1560
1561	AAATATTAAGACACTGATCACTAAATGAATGGATGATCTACTCGGGTCAGGATTGAAAGA	1620
1621	GAAATATTTCAACACCTCCCTGCTATACAATGGTCACCAGTGGTCCAGTTATTGTTCAAT	1680
1681	TTGATCATAAATTTGCTTCAATTCAGGAGCTTTGAAGGAAGTCCAAGGAAAGCTCTAGAA	1740
1741	AACAGTATAAACTTTTCAGAGGCCAAAATCCTTCACCAATTTTCCACATACTTTTCATGCCT	1800
1801	TGCCTAAAAAAAATGAAAAGAGAGTTGGTATGTCTCATGAATGTTACACAGAAGGAGTT	1860
1861	GGTTTTCATGTCATCTACAGCATATGAGAAAAGCTACCTTTCTTTTGATTATGTACACAG	1920
1921	ATATCTAAATAAGGAAGTTTGAGTTTCACATGTATATCCCAAATACAACAGTTGCTTGTA	1980
1981	TTCAGTAGAGTTTTCTTGCCACCTATTTTGTGCTGGGTTCTACCTTAACCCAGAAGACA	2040




FIG. 1B

TNF-gamma

2041 CTATGAAAAACAAGACAGACTCCACTCAAATTTATATGAACACCACTAGATACTTCCTG 2100
2101 ATCAAACATCAGTCAACATACTCTAAAGAATAACTCCAAGTCTTGGCCAGGCCGAGTGGC 2160
2161 TCACACCTGTAATCCCAACACTTTGGGAGGCCAAGGTGGGTGGATCATCTAAGGCCGGGA 2220
2221 GTTCAAGACCAGCCTGACCAACGTGGAGAAACCCCATCTCTACTNAAAATACNAAATTAG 2280
2281 CCGGGCGTGGTAGCGCATGGCTGTAANCCTGGCTACTCAGGAGGCCGAGGCAGAANAATT 2340
2341 NCTTGAAGTGGGGAGGCAGAGGTTGCGGTGAGCCCAGANCGGCCATTGCACTCCAGCCT 2400
2401 GGGTAACAAGAGCAAACTCTGTCCAAAAAAAAAAAAAAAAAAAA 2442

FIG. 1C

	1	1	1	1	1
TNFgamma	-	-	-	-	-
TNFAalpha	-	-	-	-	-
TNFbeta	-	-	-	-	-
Ltbeta	G	A	-	-	-
FASL	Q	Q	P	V	N

2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	TNFgamma		
9	D	V		L	A	E	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	TNFalpha		
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	TNFbeta		
5	G	L		G	R	G		G	R	L	Q	G	R	-	-	-	-	G	S	L	L	A	V	A	G	Ltbeta
31	S	C	P	S	S	C	P	R	R	G	P	G	Q	R	R	P	P	P	P	L	P	P	P	S	Q	FASL

2	-	-	-	-	-	R	F	L	S	-	K	V	P	M	TNFgamma
16	-	-	-	-	-	R	C	L	F	L	S	L	L	I	TNFalpha
9	-	-	-	-	-	R	-	L	H	L	L	L	L	L	TNFBeta
26	-	-	-	-	-	-	-	L	L	A	V	T	L	A	LTbeta
61	-	-	-	D	K	N	E	L	W	L	P	V	M	V	FASL

TNFgamma
TNFAalpha
TNFBbeta
Ltbeta
FASL

	L	I	S	P	A	V	R	T	F	N	D	H	-	-	-	TNFgamma
26	-	-	-	-	-	-	E	T	Q	K	-	-	-	-	-	TNFalpha
69	[X]	[X]	[X]	[X]	[X]	X	[X]	[S]	[R]	-	[K]	[P]	[V]	[A]	[H]	TNFbeta

MATCH WITH FIG. 2B

FIG. 2A

MATCH WITH FIG. 2A

40	L	T	P	S	A	N	Q	T	A	R	Q	H	P	K	M	H	L	A	H	S	T	L	K	P	A	A	H	L	L	G	TNfbeta	
71	F	-	-	-	-	Q	K	L	P	E	E	E	P	E	T	D	L	S	P	G	L	-	-	P	A	A	H	L	L	G	LTbeta	
121	V	S	S	F	E	K	Q	I	A	N	P	S	T	P	S	E	T	K	K	P	-	-	R	S	V	A	H	L	L	T	G	FASL

38	-	-	-	-	-	P	-	A	L	H	Q	L	W	E	H	E	R	L	A	F	T	K	N	R	M	N	Y	T	N	-	K	TNfgamma
95	N	P	Q	A	E	G	-	Q	L	L	W	L	L	N	N	A	R	A	L	L	L	N	G	V	E	L	R	D	-	N	TNFalpha	
70	D	P	S	K	Q	N	-	S	L	L	W	R	A	N	T	K	E	A	F	L	Q	D	G	F	S	L	S	N	-	N	TNfbeta	
95	A	P	L	R	-	Q	I	G	L	L	W	E	T	T	Y	G	Q	A	F	L	T	S	G	T	Q	F	S	D	A	E	LTbeta	
149	N	P	-	-	-	-	-	P	L	L	W	E	D	T	-	G	T	A	L	I	-	S	G	V	K	Y	K	K	-	G	FASL	

TNFbeta
LTbeta
FASL

TNFgamma
TNFalpha
TNFbeta
LTbeta
FASL

61	F	L	L	I	P	E	S	G	D	Y	F	I	Y	S	Q	V	T	P	R	G	M	T	S	E	C	S	E	I	R	Q
123	Q	L	V	V	P	S	E	G	L	Y	L	I	Y	S	Q	V	L	P	K	G	Q	Q	Q	-	-	-	-	-	-	-
98	S	L	L	V	P	T	S	G	I	Y	F	V	Y	S	Q	V	V	P	S	G	K	A	Y	S	P	K	A	-	-	-
124	G	L	A	L	P	Q	D	G	L	Y	Y	L	Y	C	L	V	G	Y	R	G	R	A	P	G	G	D	P	Q	-	-
177	G	L	V	I	N	E	A	G	L	Y	F	V	Y	S	K	V	Y	F	R	G	Q	S	Q	P	-	-	-	-	-	-

TNFgamma
TNFalpha
TNFbeta
LTbeta
FASL

91	A	G	R	P	N	K	P	D	S	I	T	V	V	I	T	K	V	T	D	S	V	P	E	P	T	Q	-	-	-	-
146	-	-	-	P	S	T	H	V	L	L	S	H	T	I	S	R	I	A	V	S	Y	Q	T	K	V	N	-	-	-	-
125	-	-	-	P	S	S	P	L	Y	L	Q	L	E	V	Q	L	F	S	S	Q	Y	P	F	H	V	P	-	-	-	-
154	G	-	-	-	-	R	S	V	T	L	Y	R	S	L	Y	R	A	G	N	Y	G	P	G	T	L	V	-	-	-	-
204	-	-	-	-	-	-	-	-	-	L	S	H	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TNFgamma
TNFalpha
TNFbeta
LTbeta
FASL

MATCH WITH FIG. 2C

FIG.2B

FIG. 3A

Tissue distribution of TNFgamma mRNA

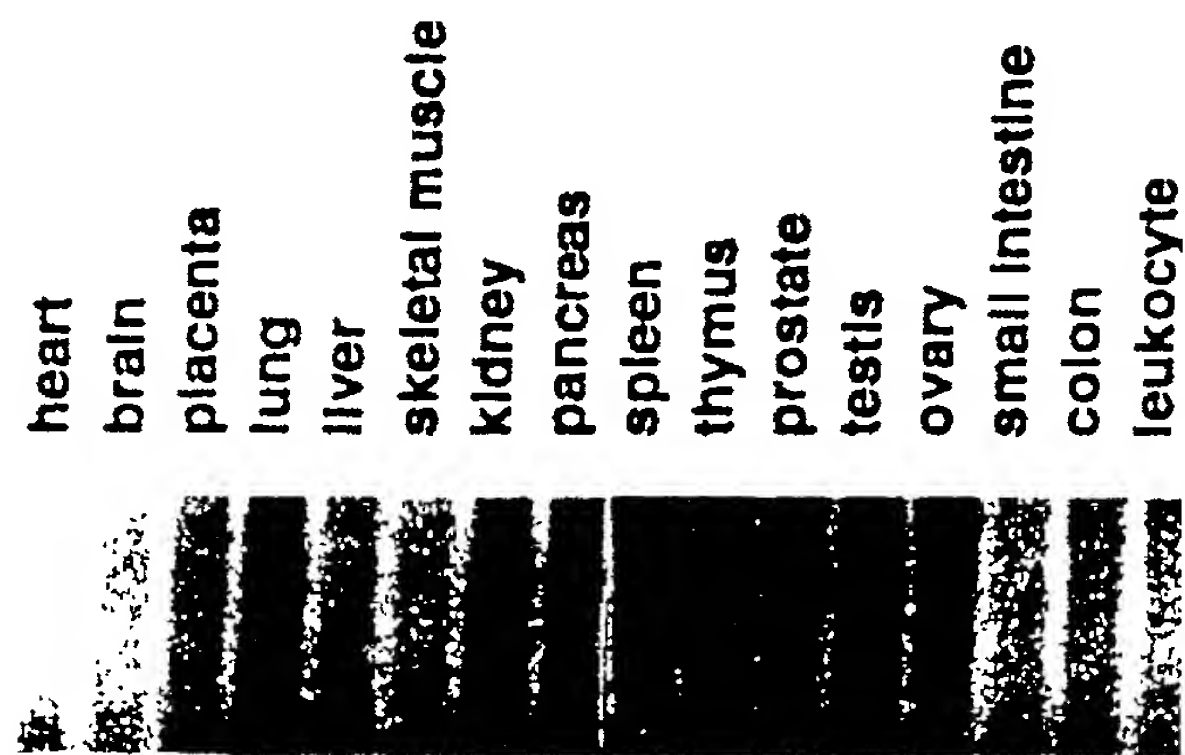
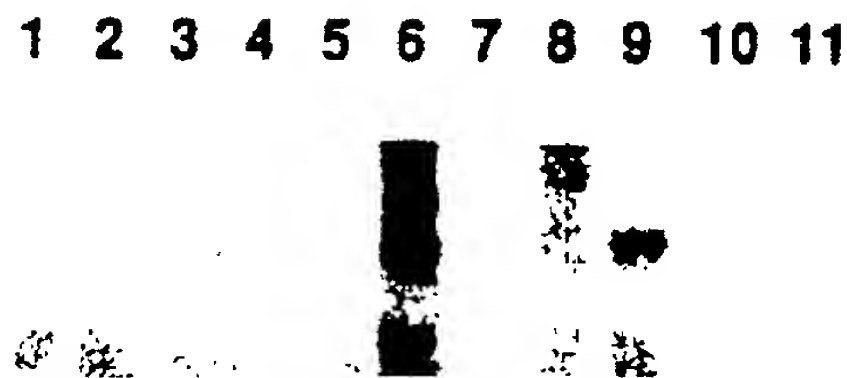


FIG. 3B

Expression of TNFgamma in HUVEC



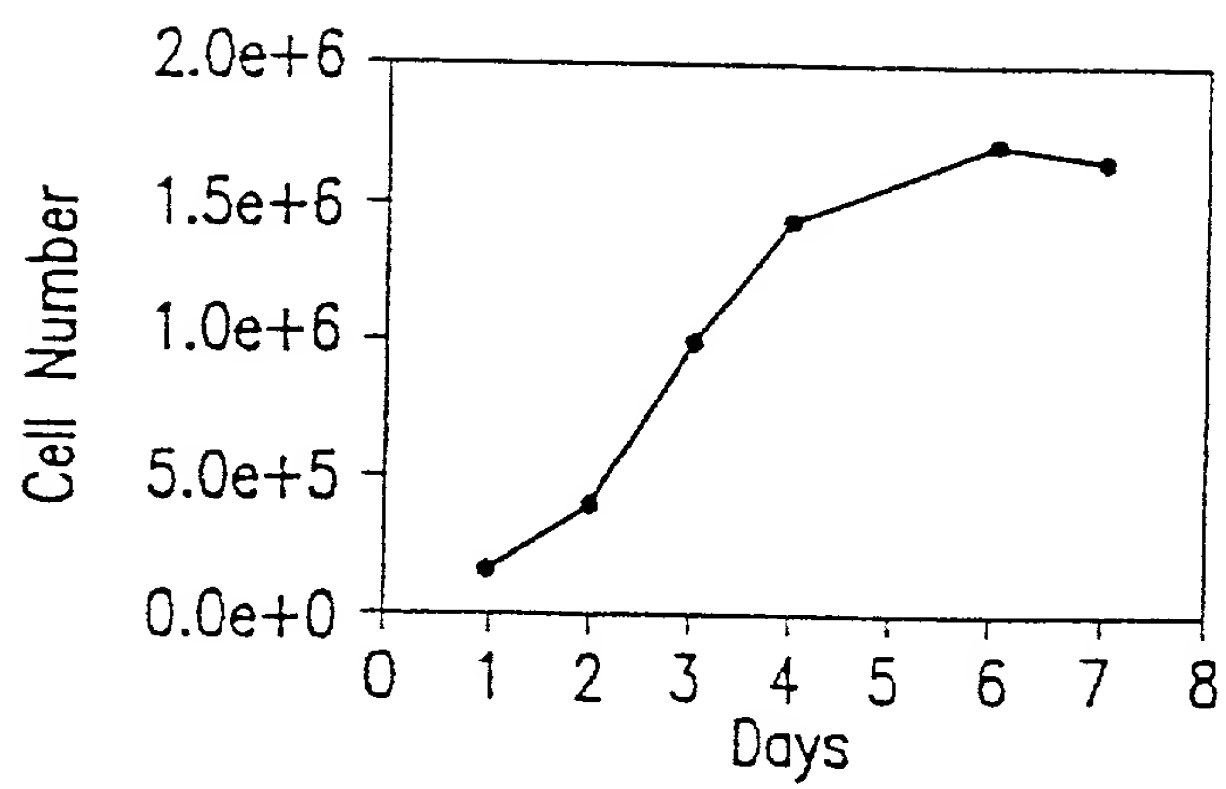


FIG.4

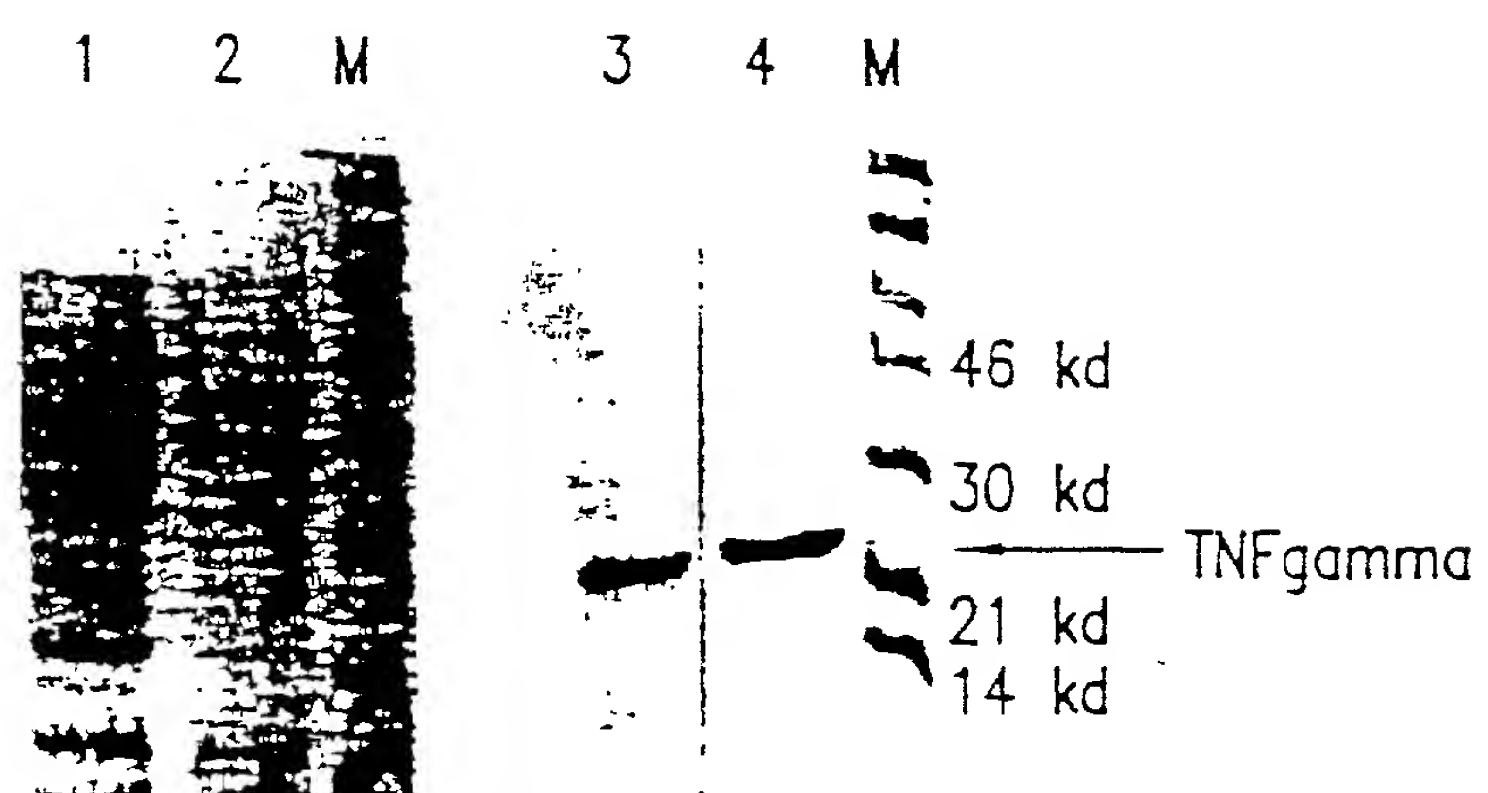
Expression of TNF γ in *E. coli*

FIG.5

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Expression of TNF_γ in baculovirus system

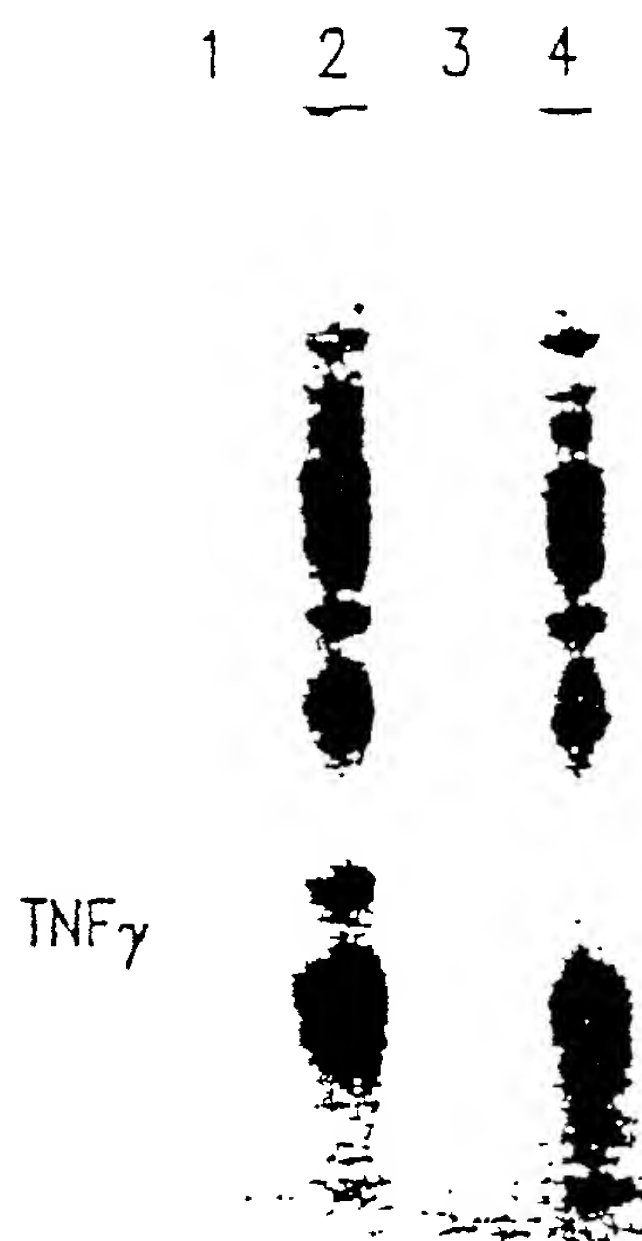


FIG.6

WEHI164
TNF α

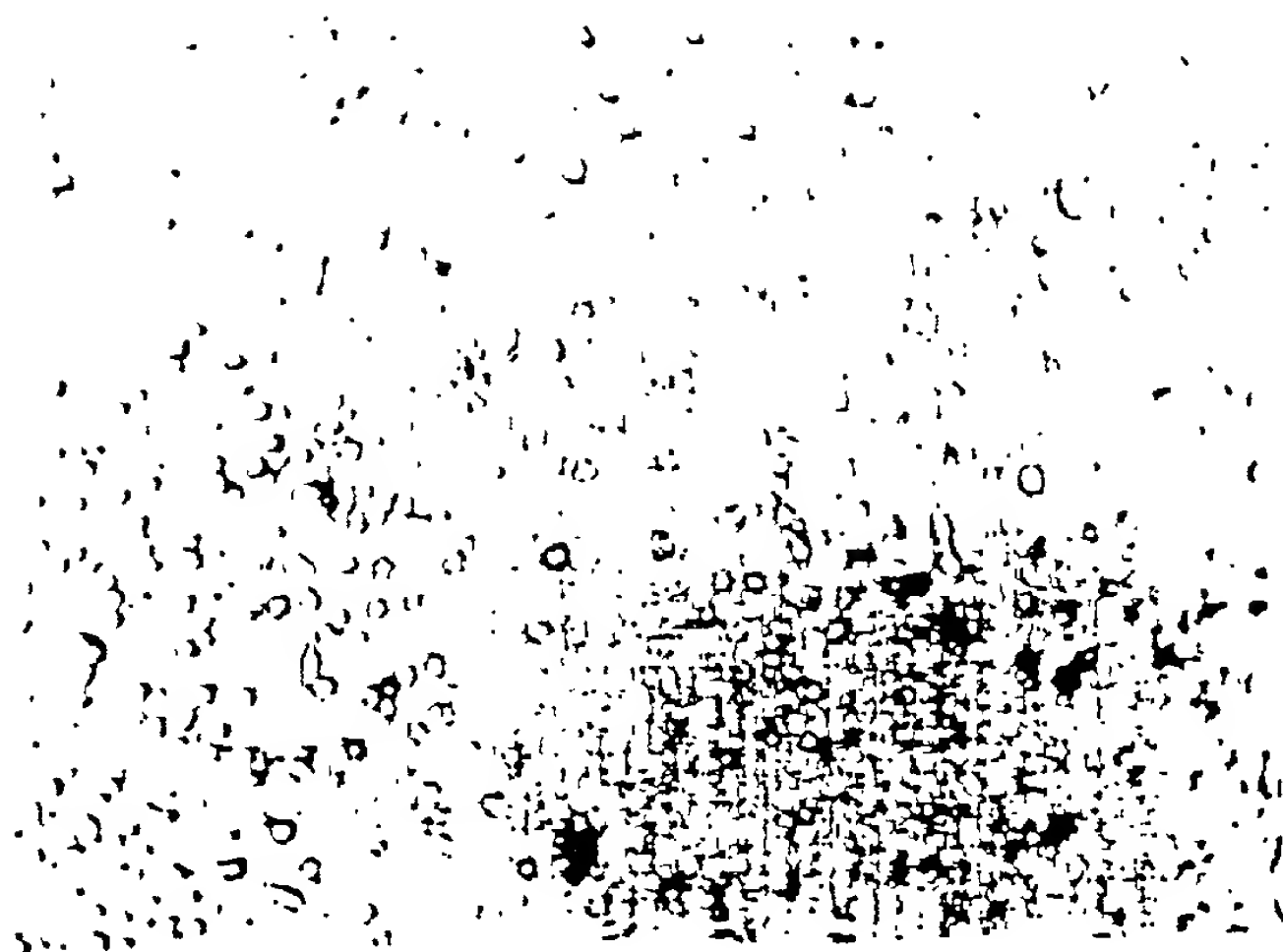


FIG.7Ab

WEHI164
Control



FIG.7Aa

WEHI164
TNF β

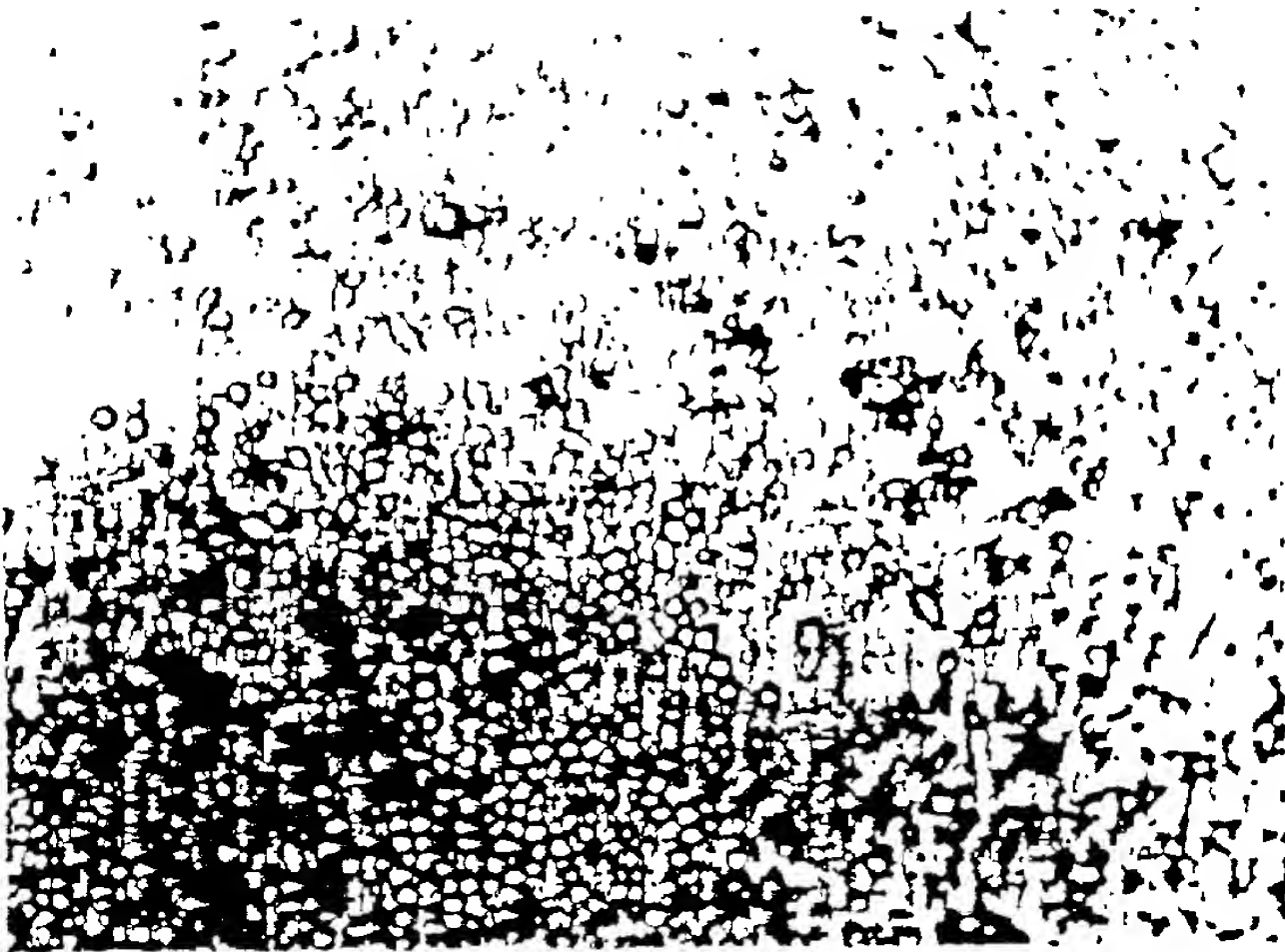


FIG.7Ad

WEHI164
TNF γ

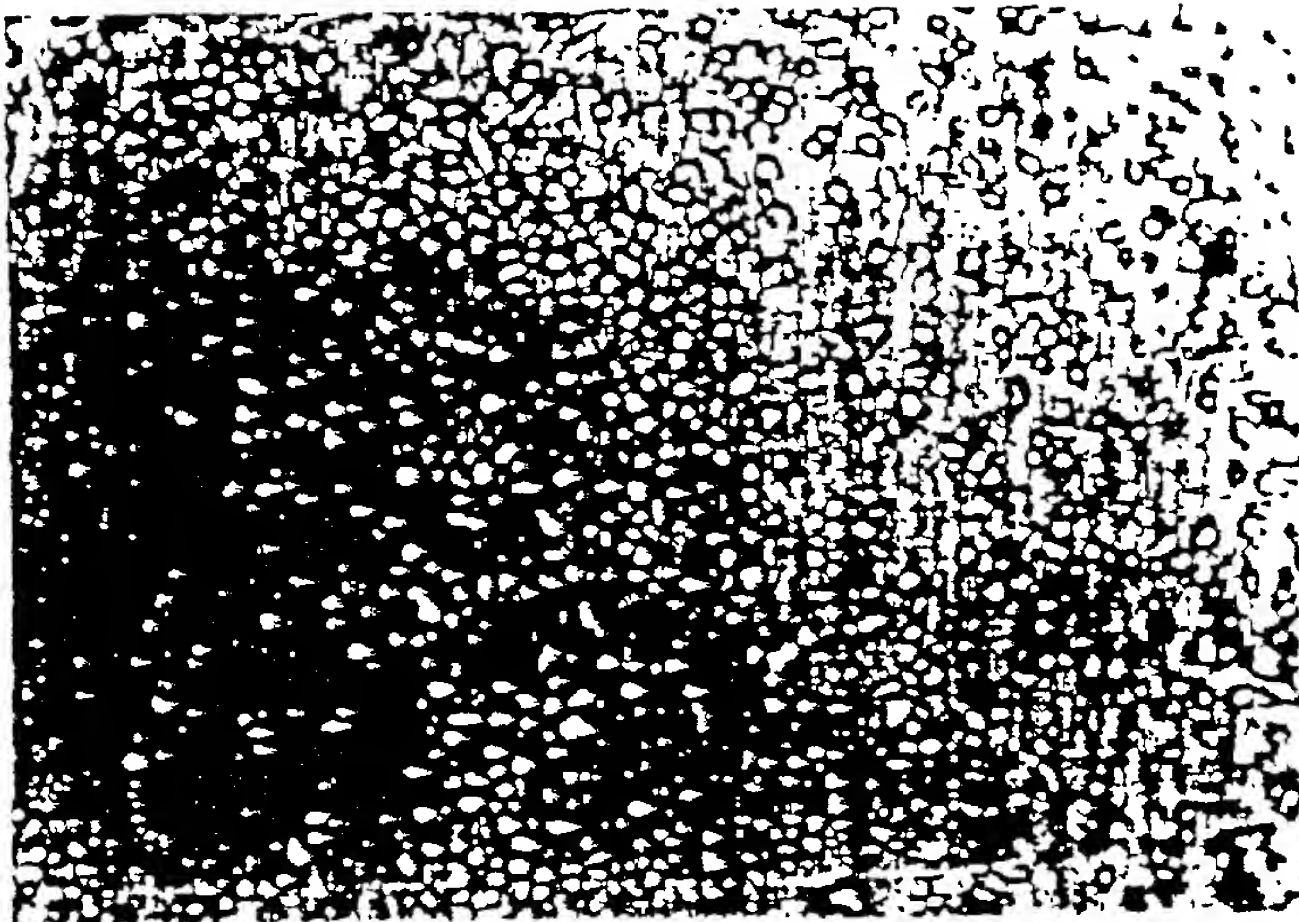
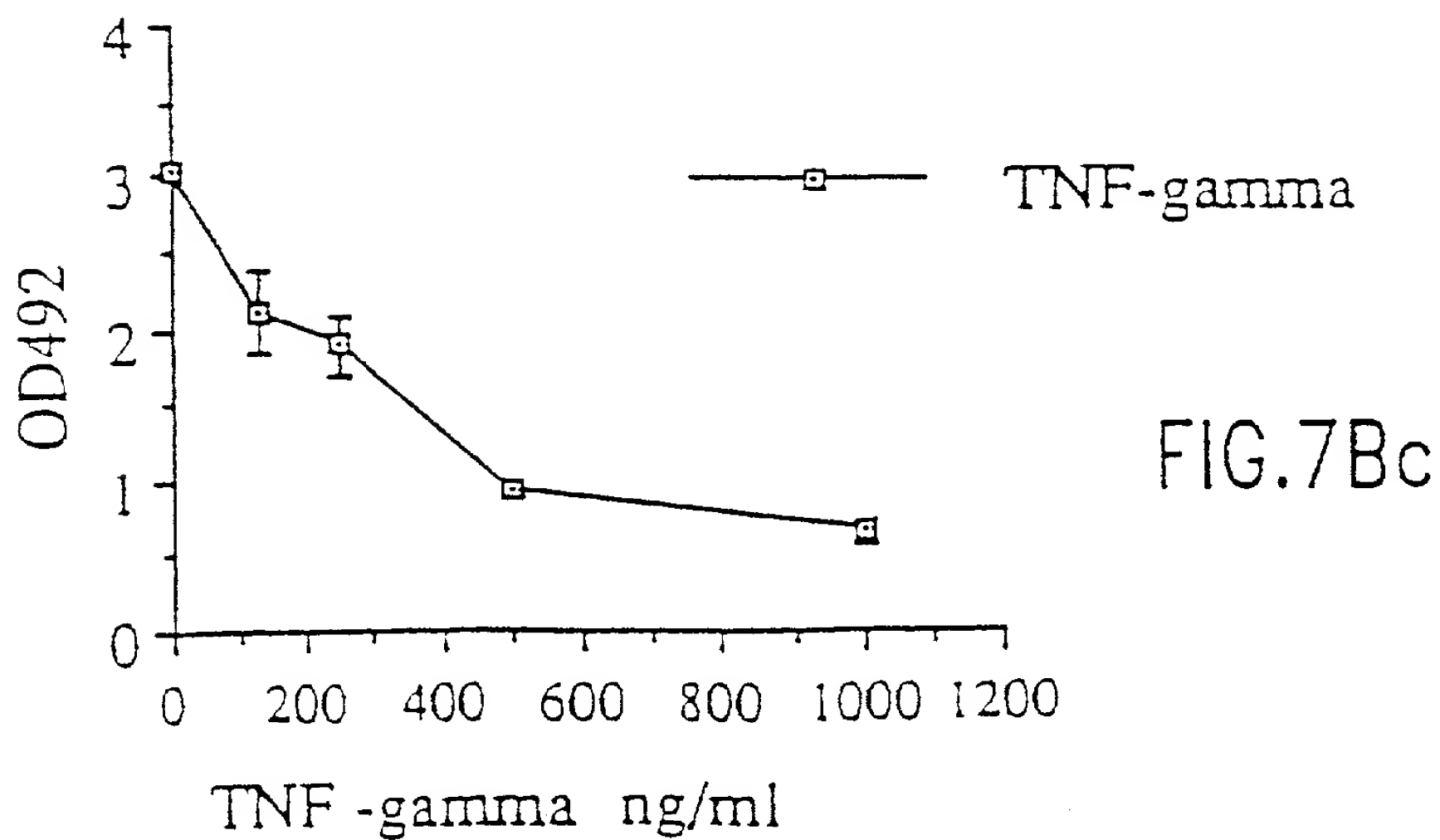
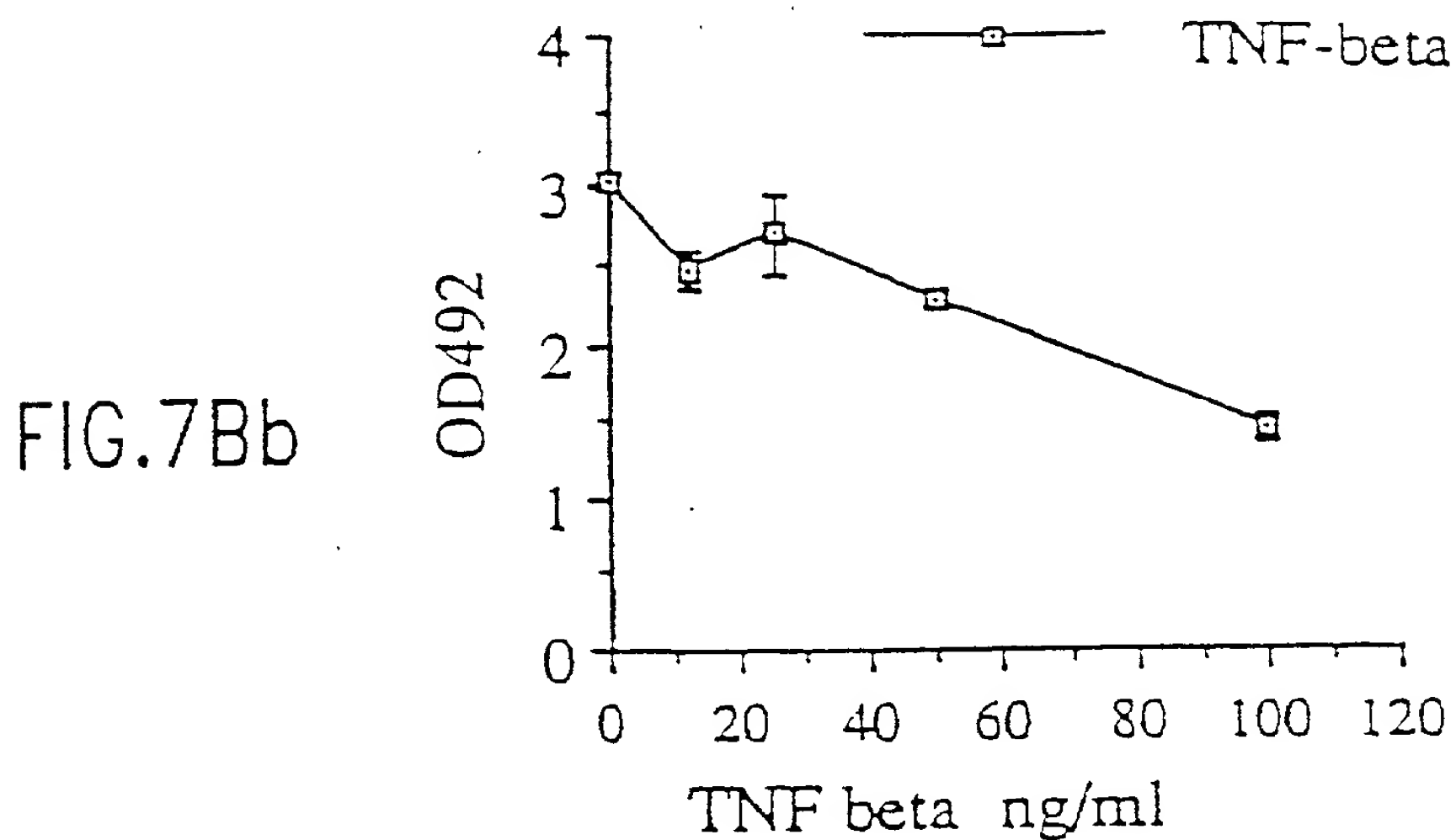
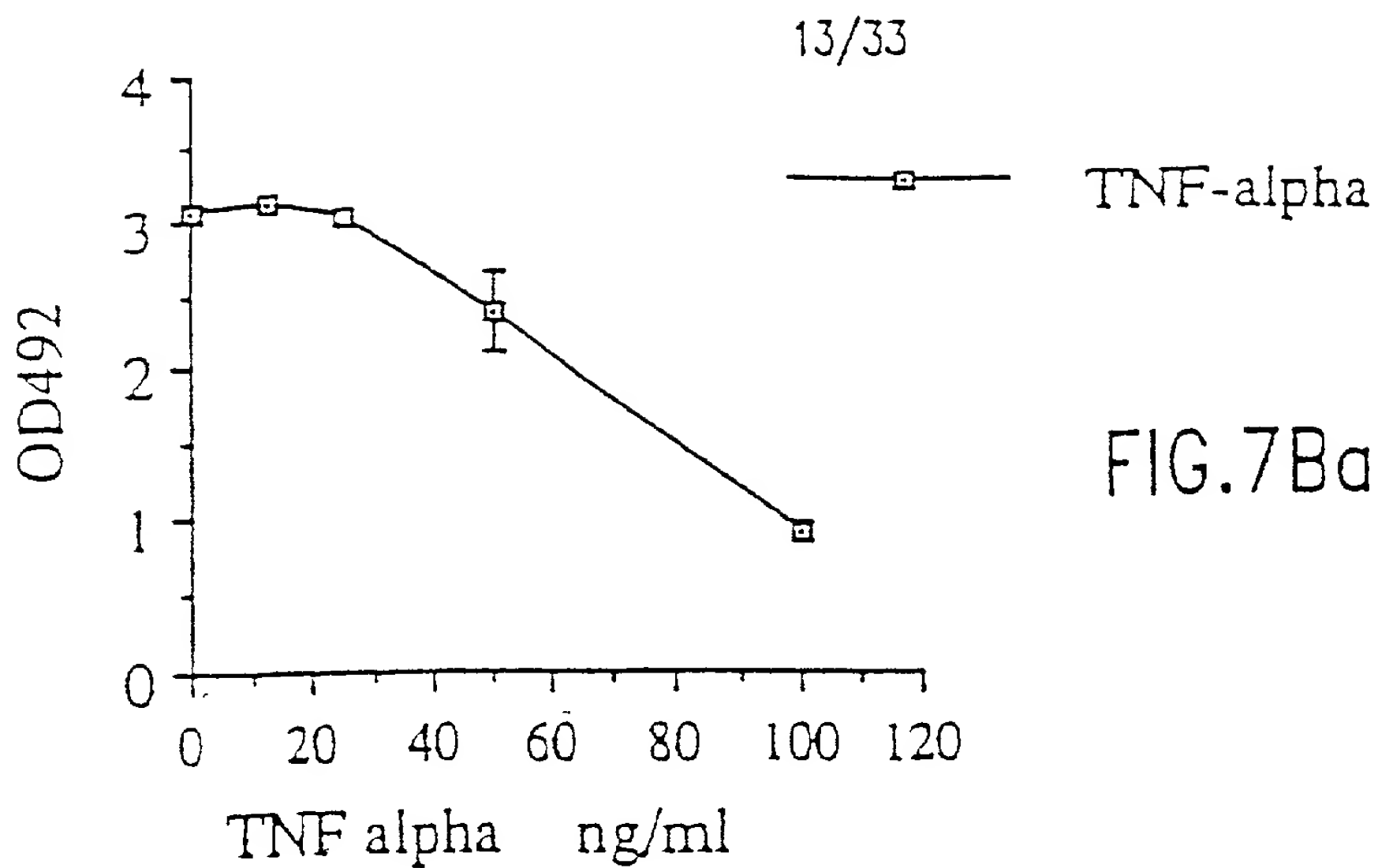


FIG.7Ac



L929
Control

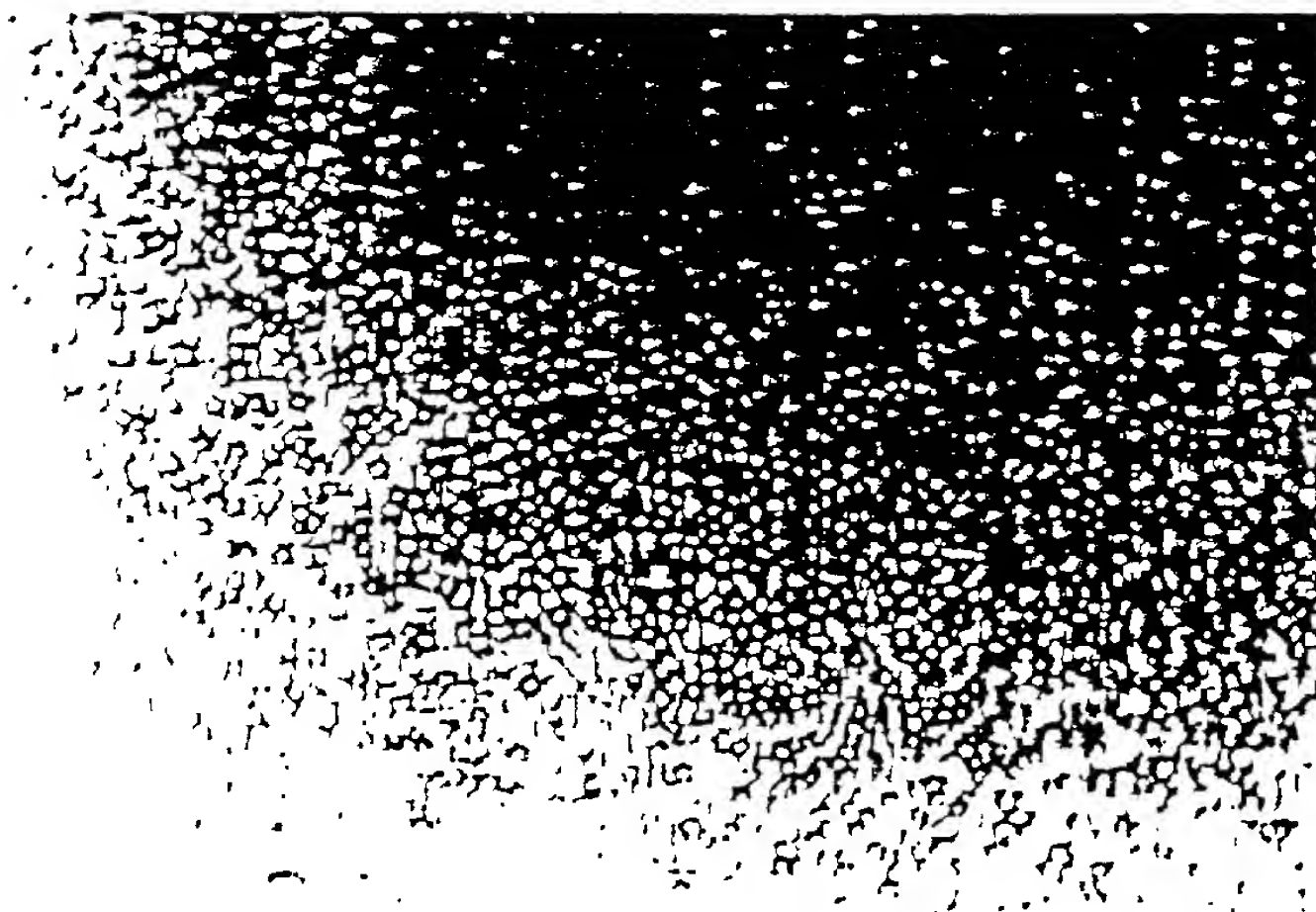


FIG.8A

L929
TNF α

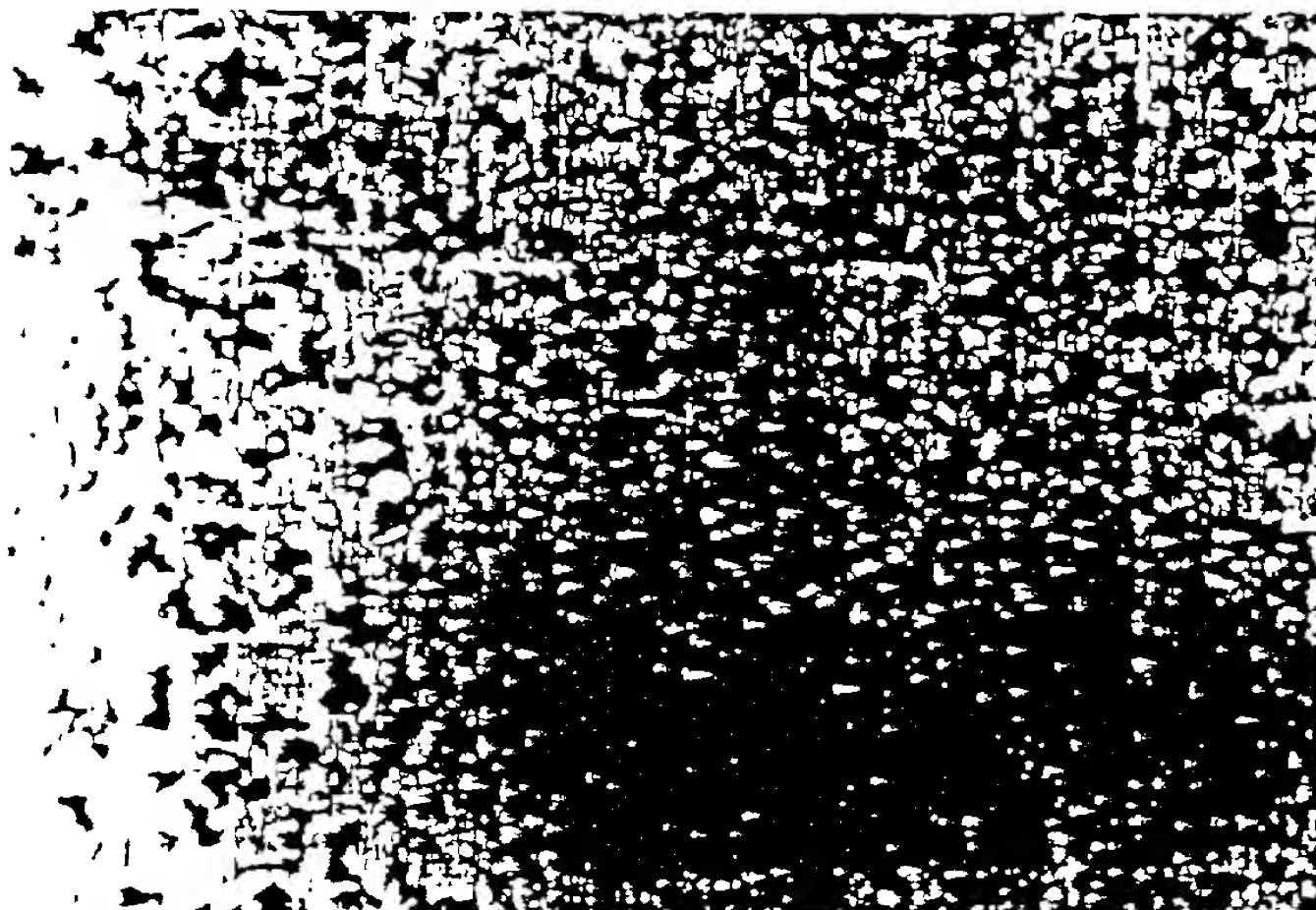


FIG.8B

L929
TNF β

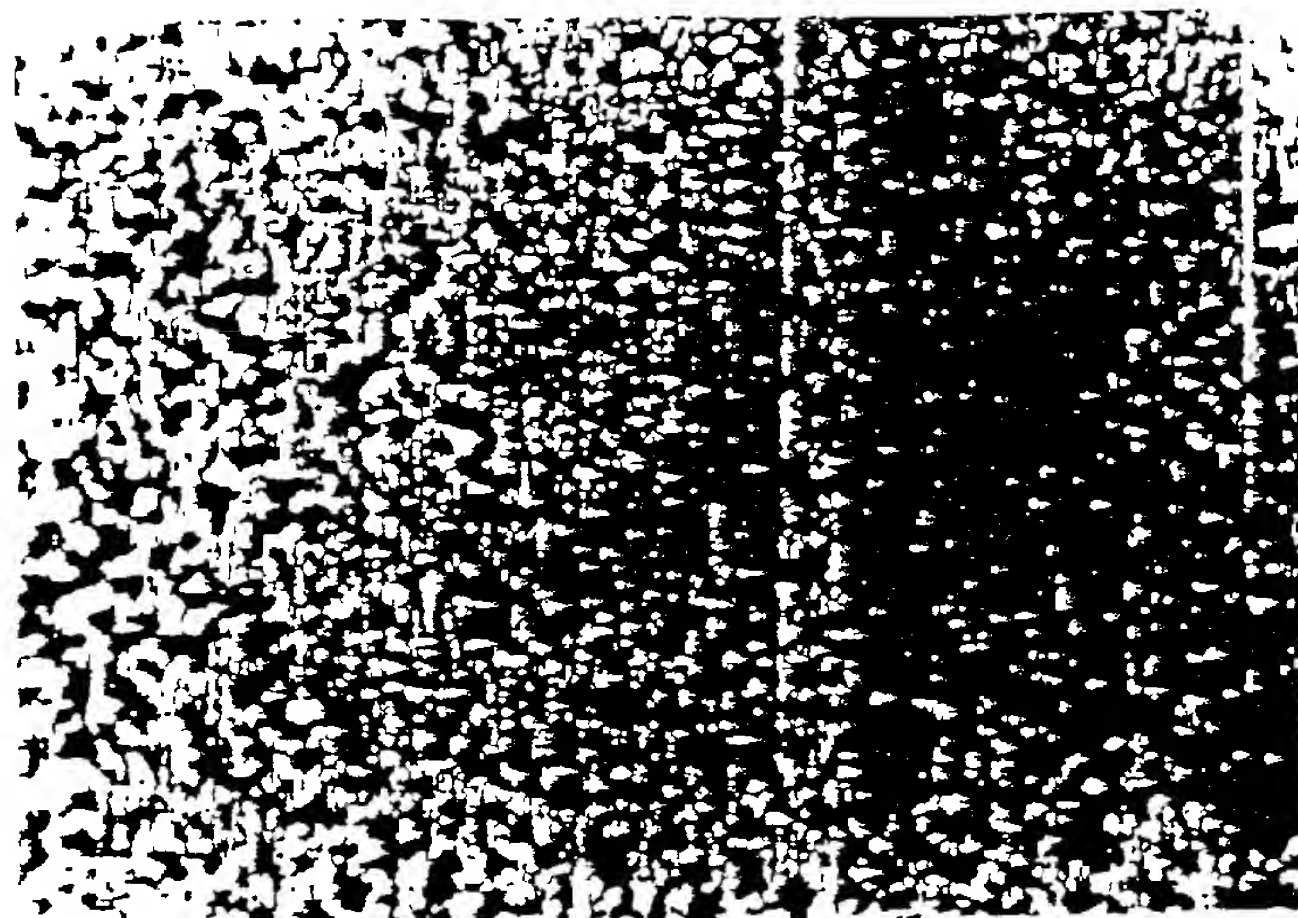


FIG.8D

L929
TNF γ

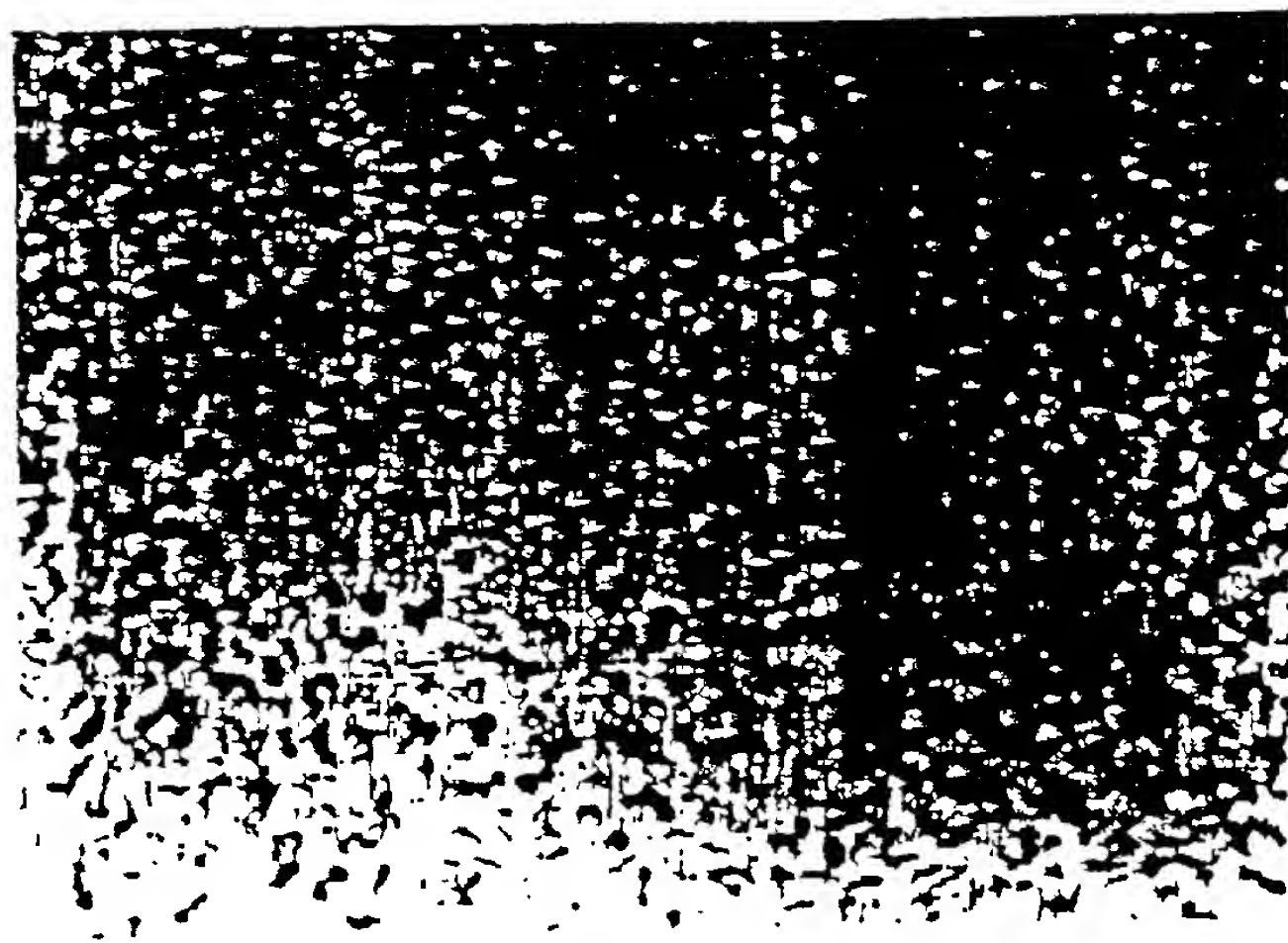
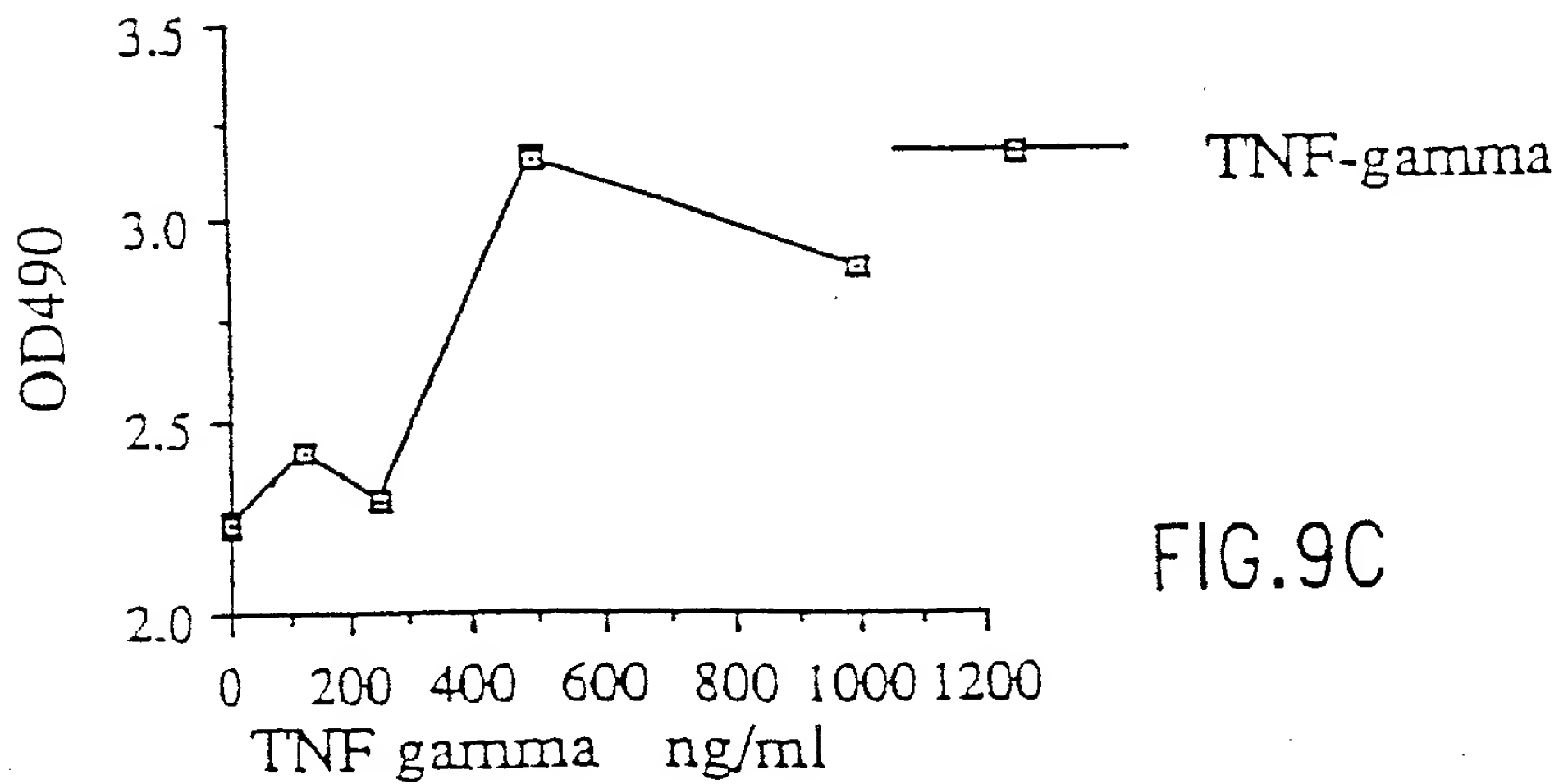
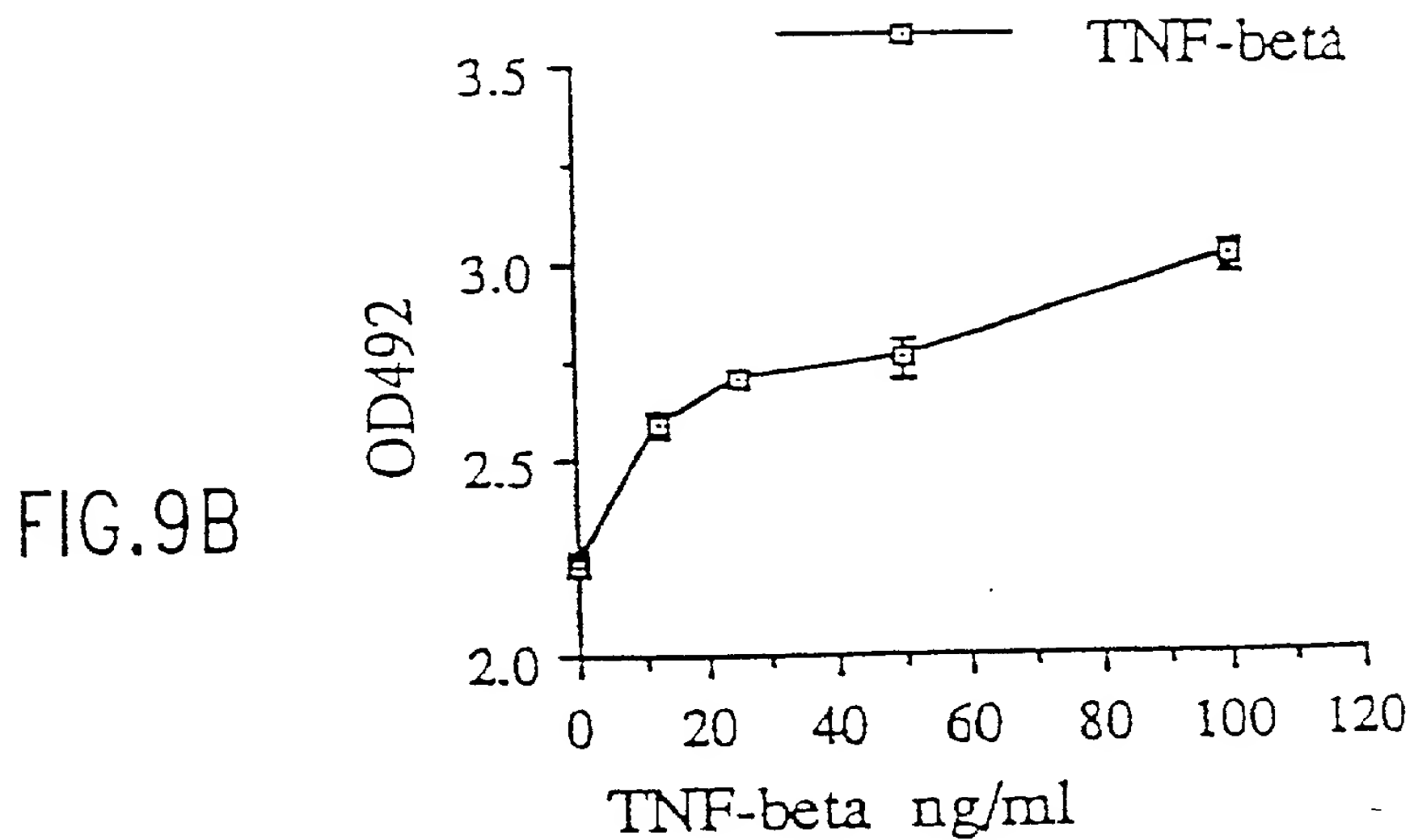
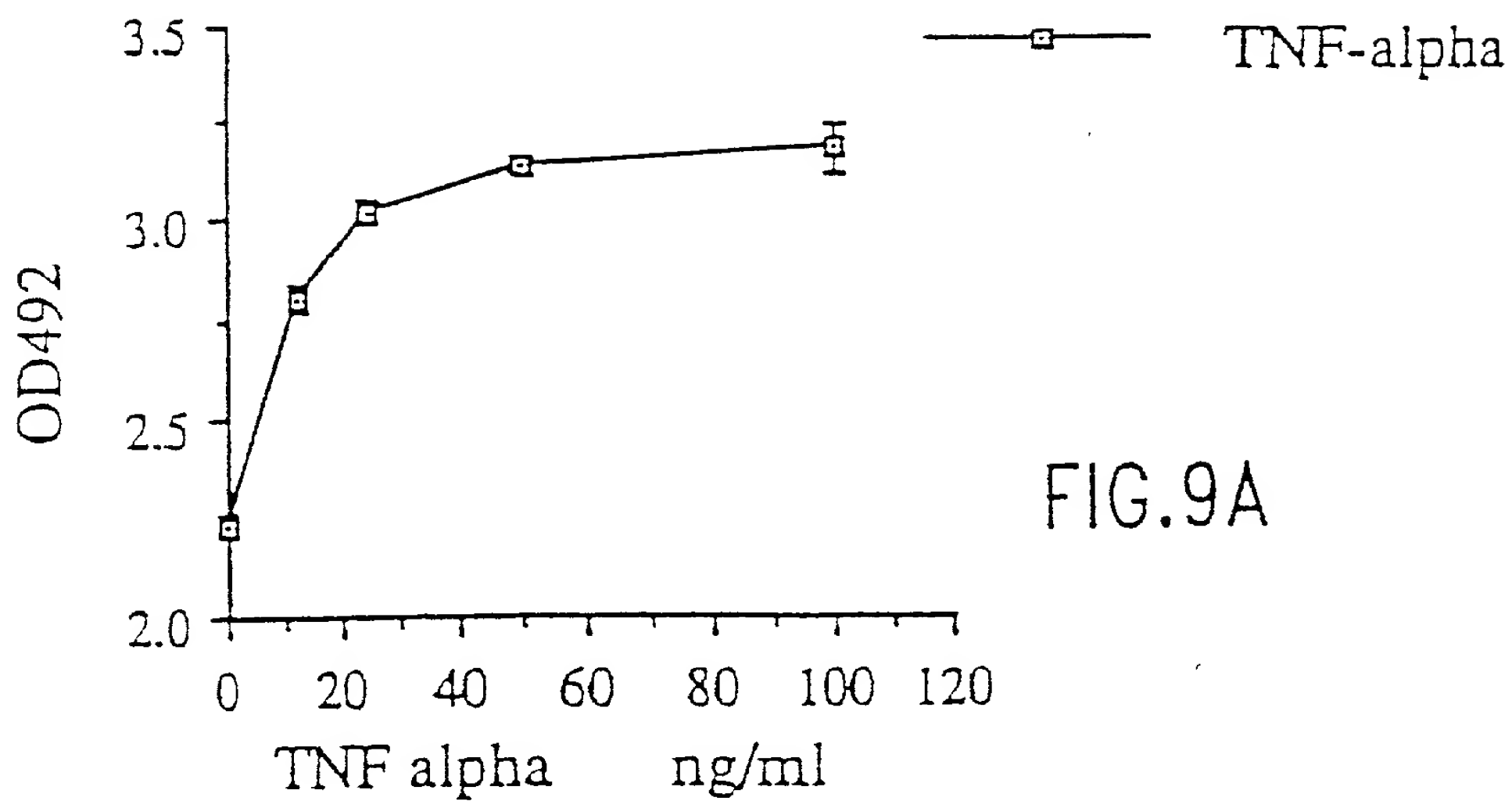


FIG.8C



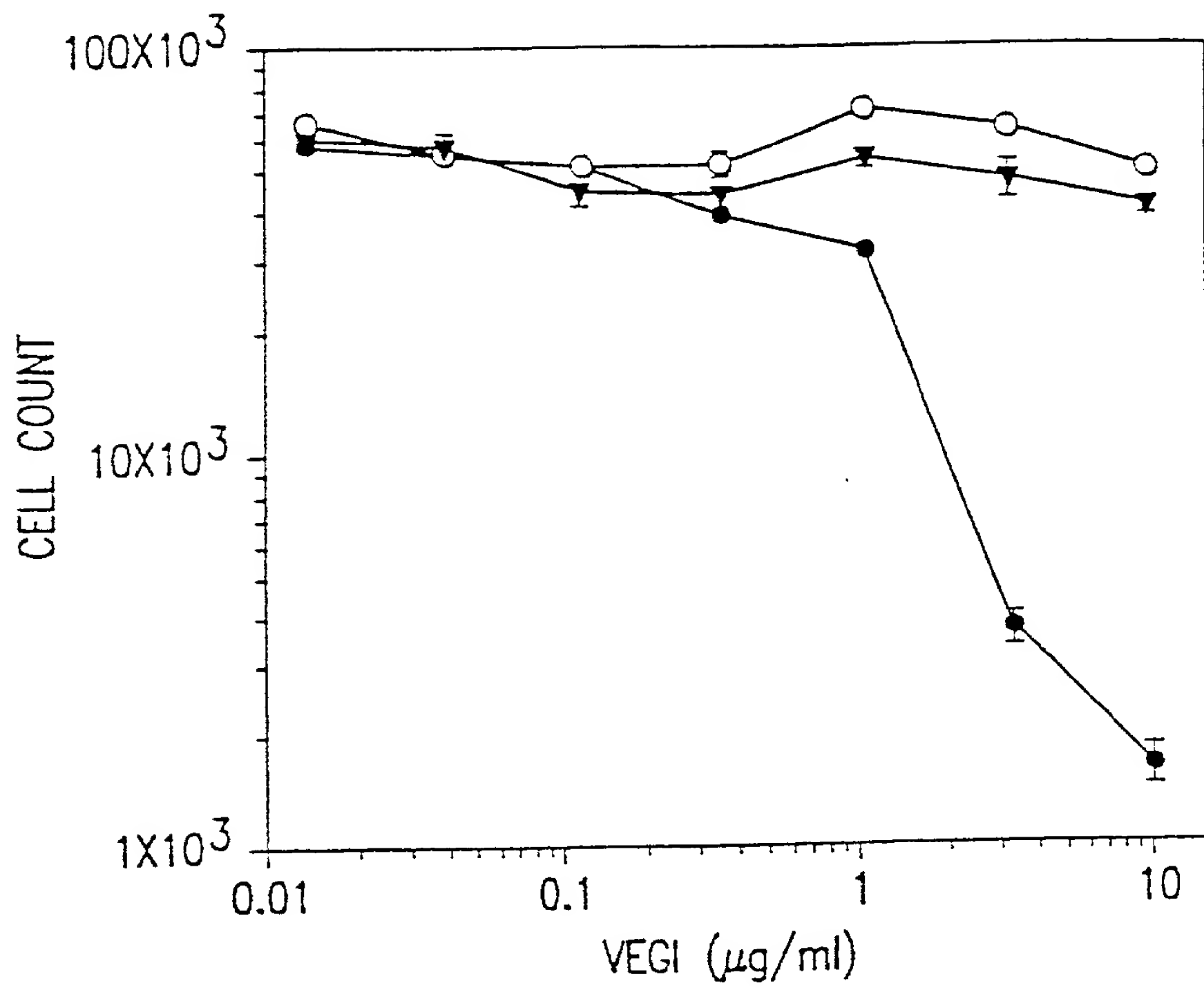


FIG.10

HL60
TNF α

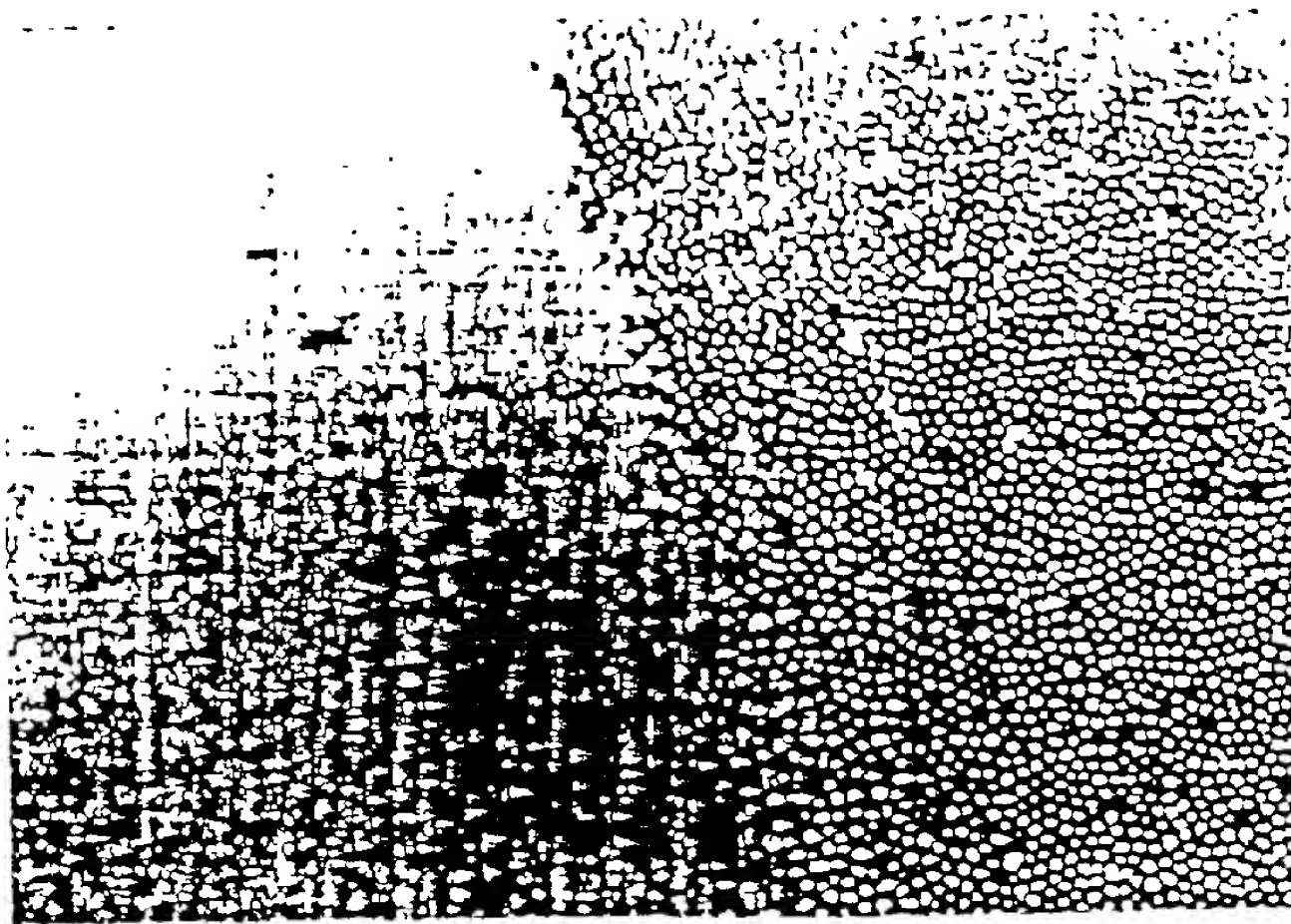


FIG.11B

HL60
Control

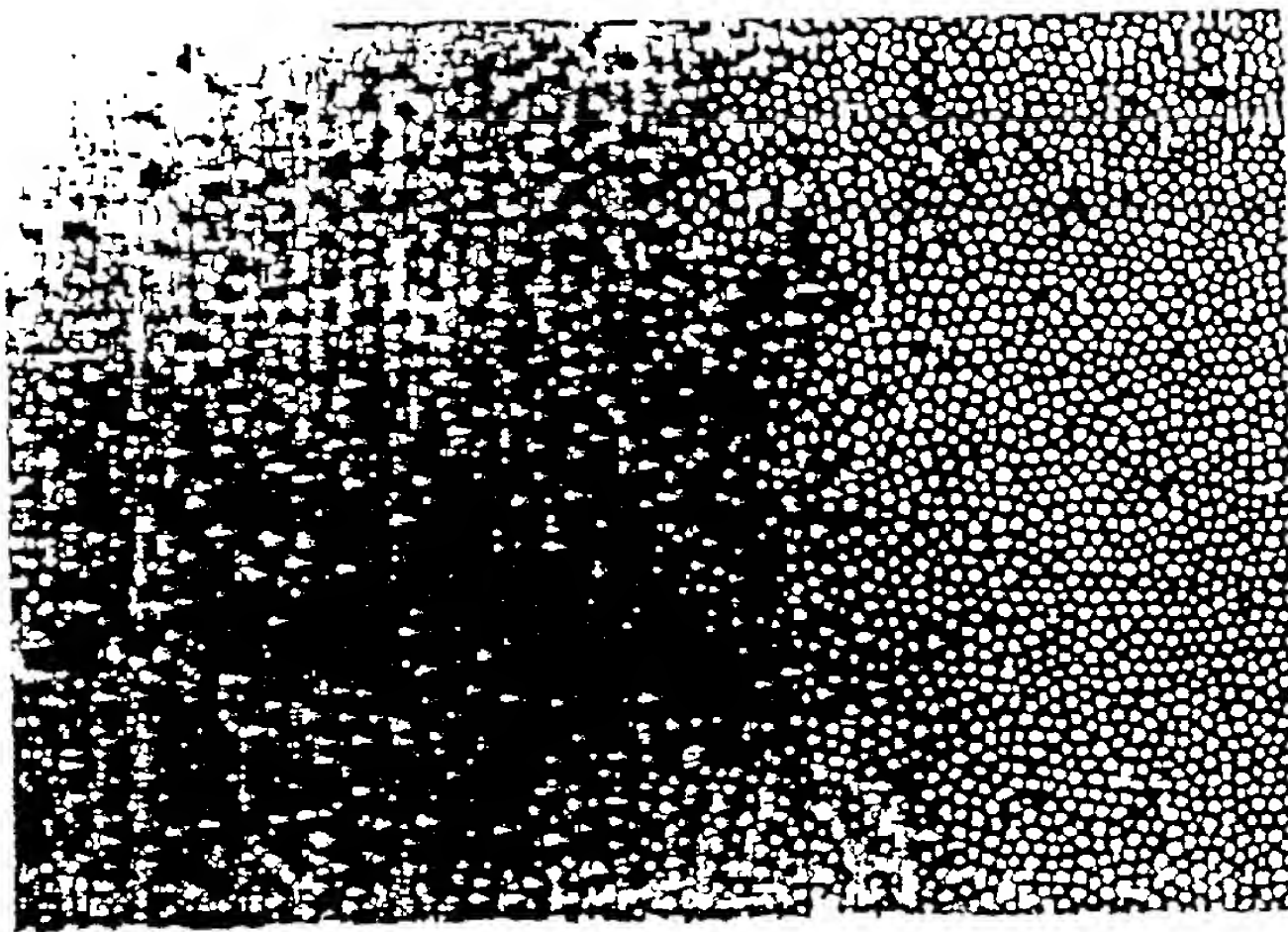


FIG.11A

HL60
TNF γ



FIG. 11C

2020-09-06

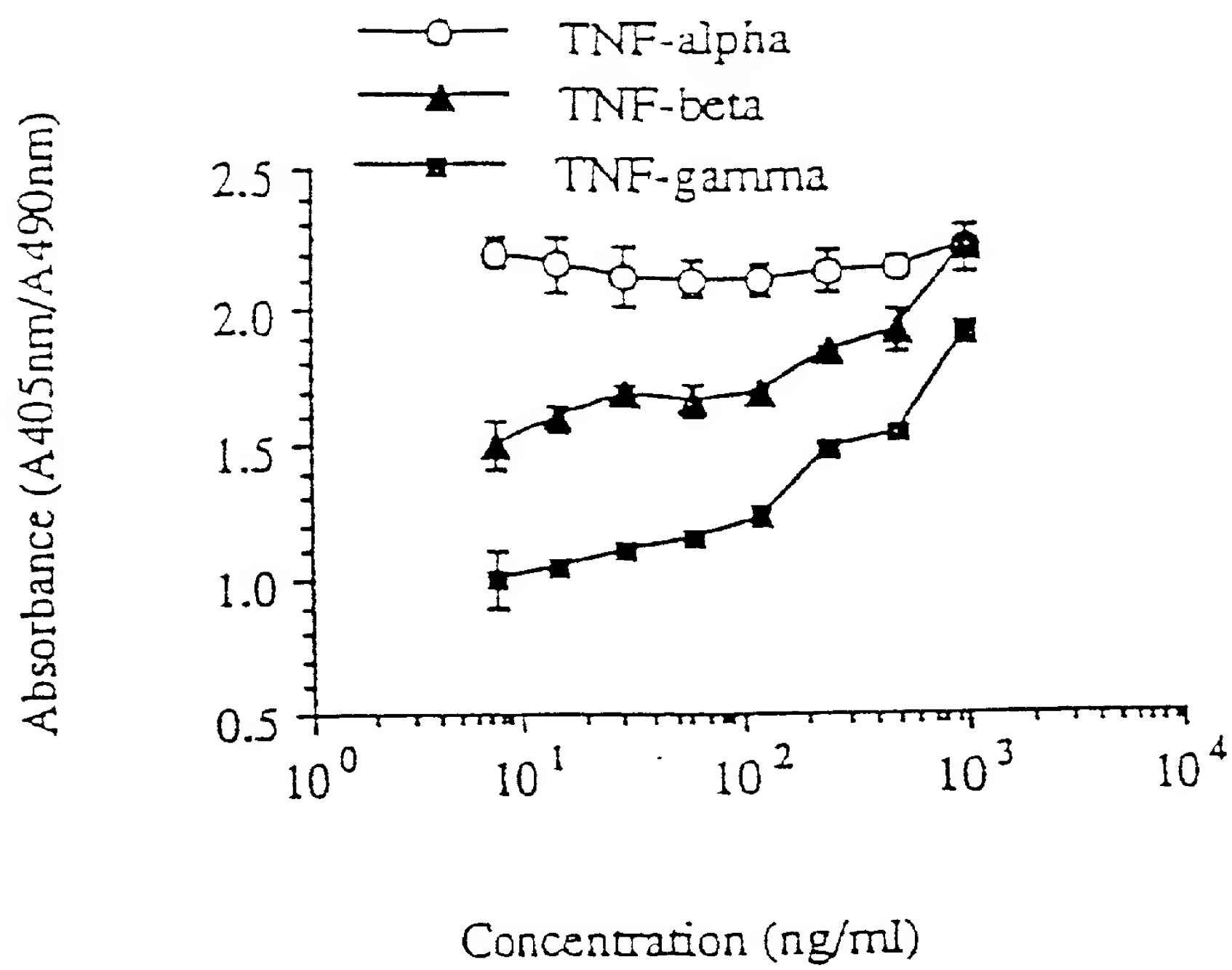


FIG.12

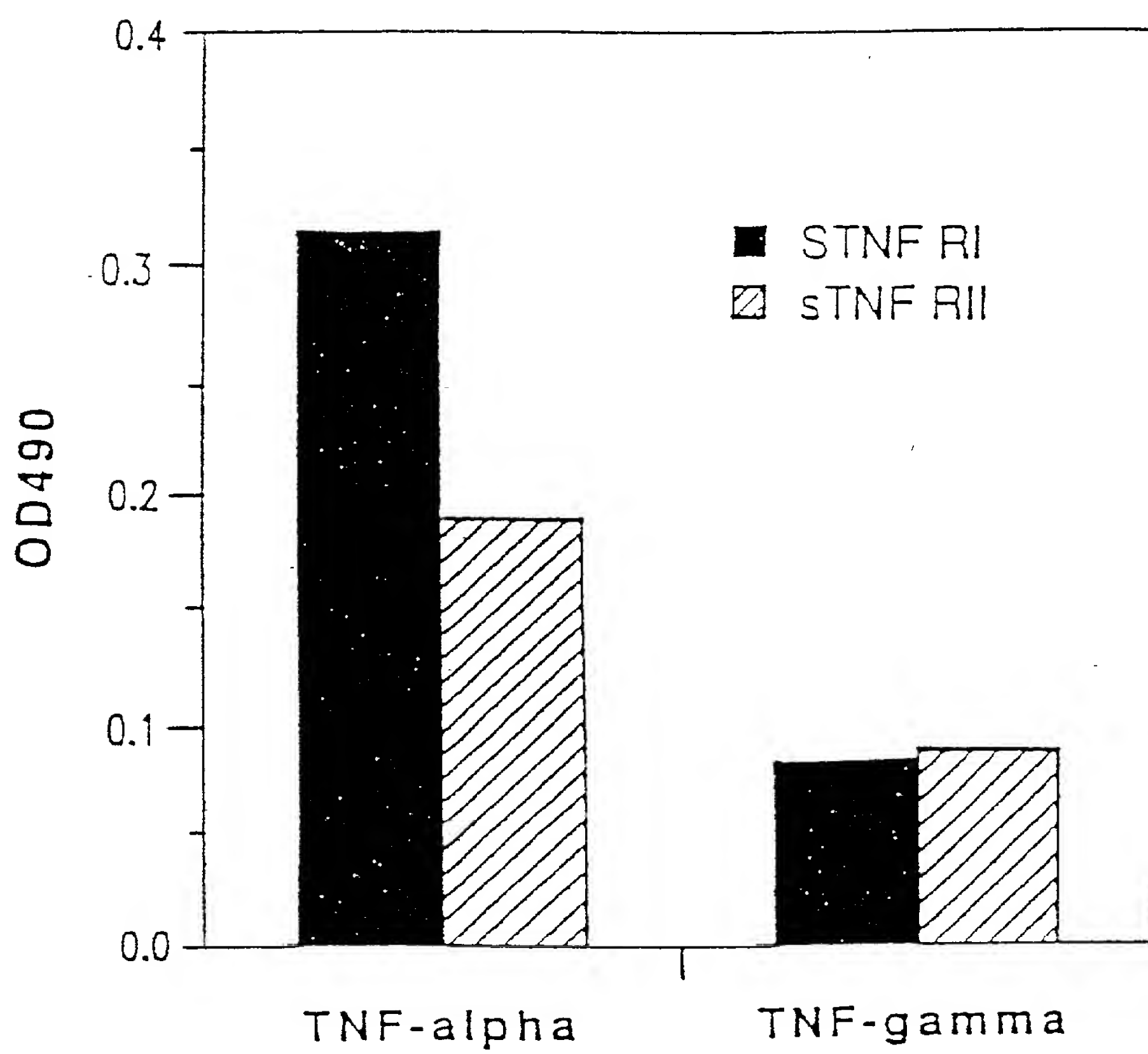


FIG.13

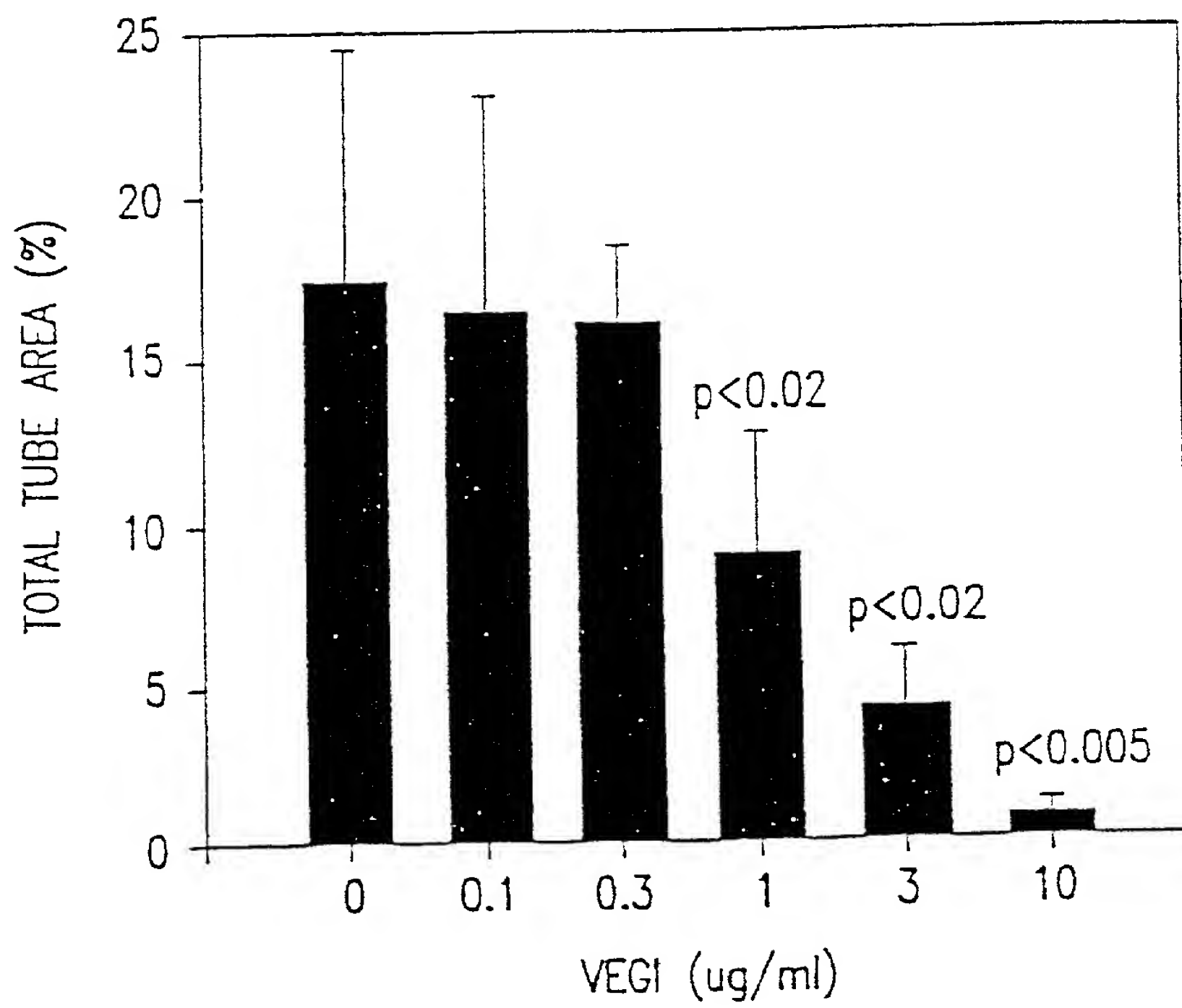


FIG. 14

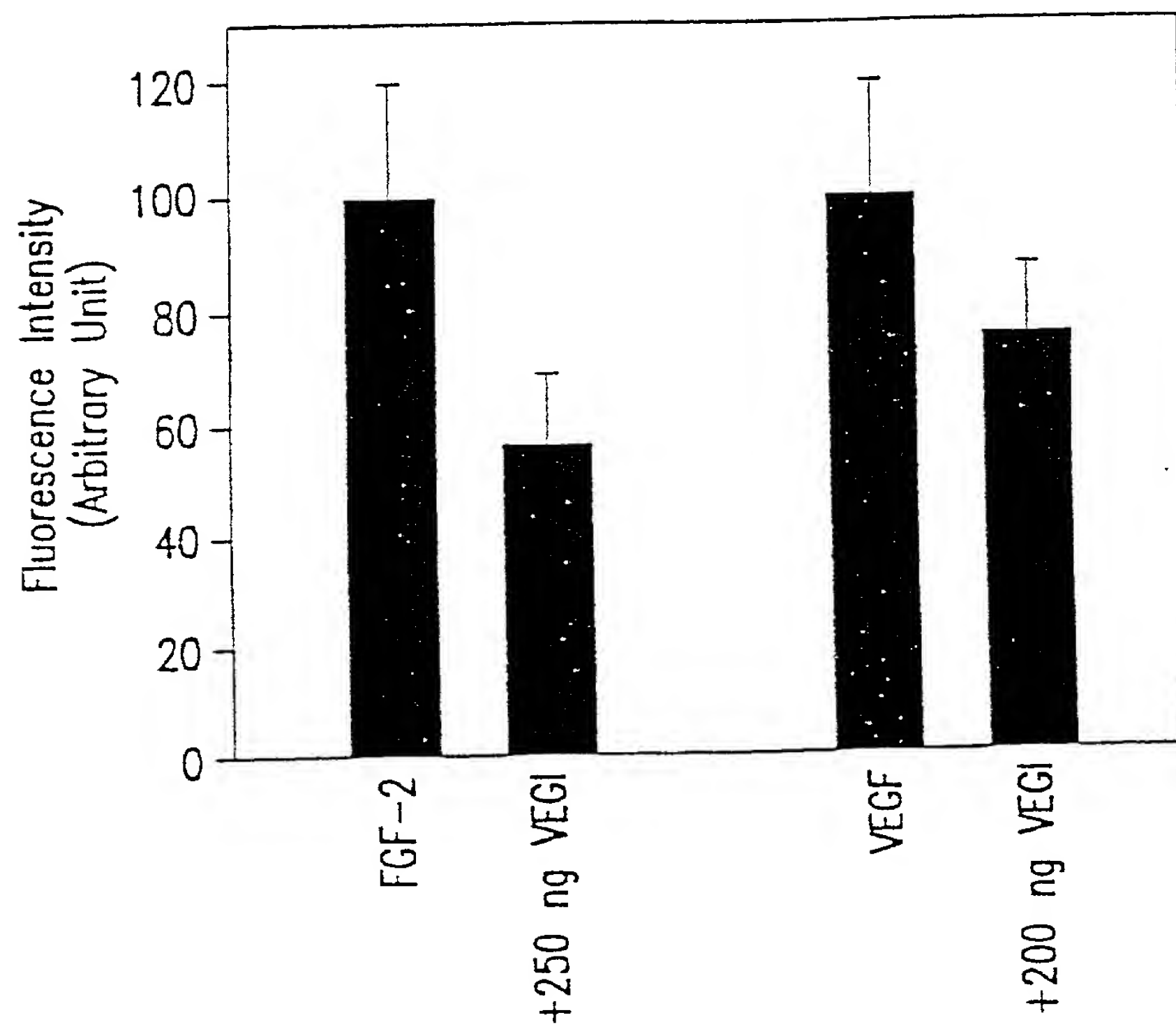


FIG. 15

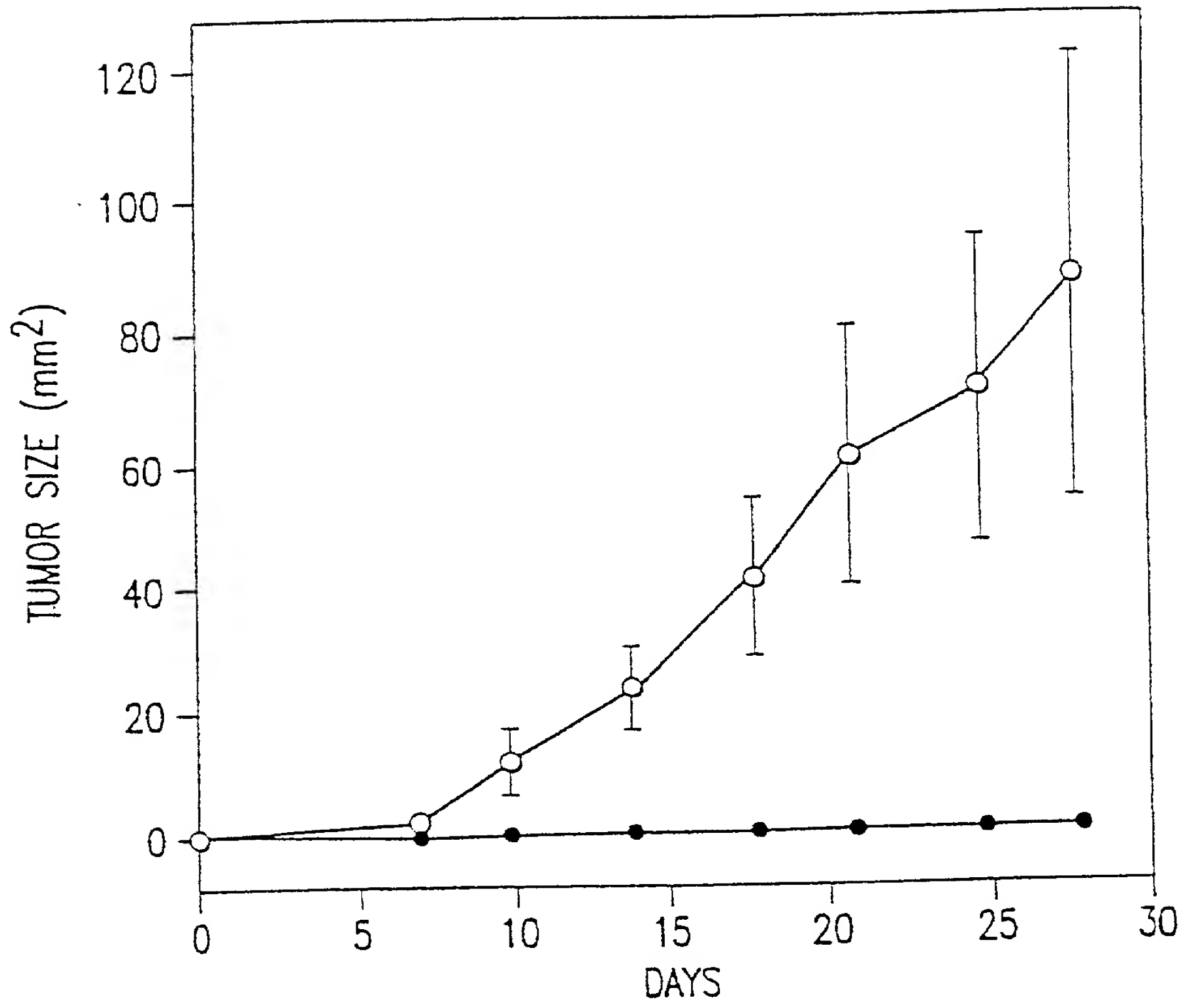


FIG. 16A

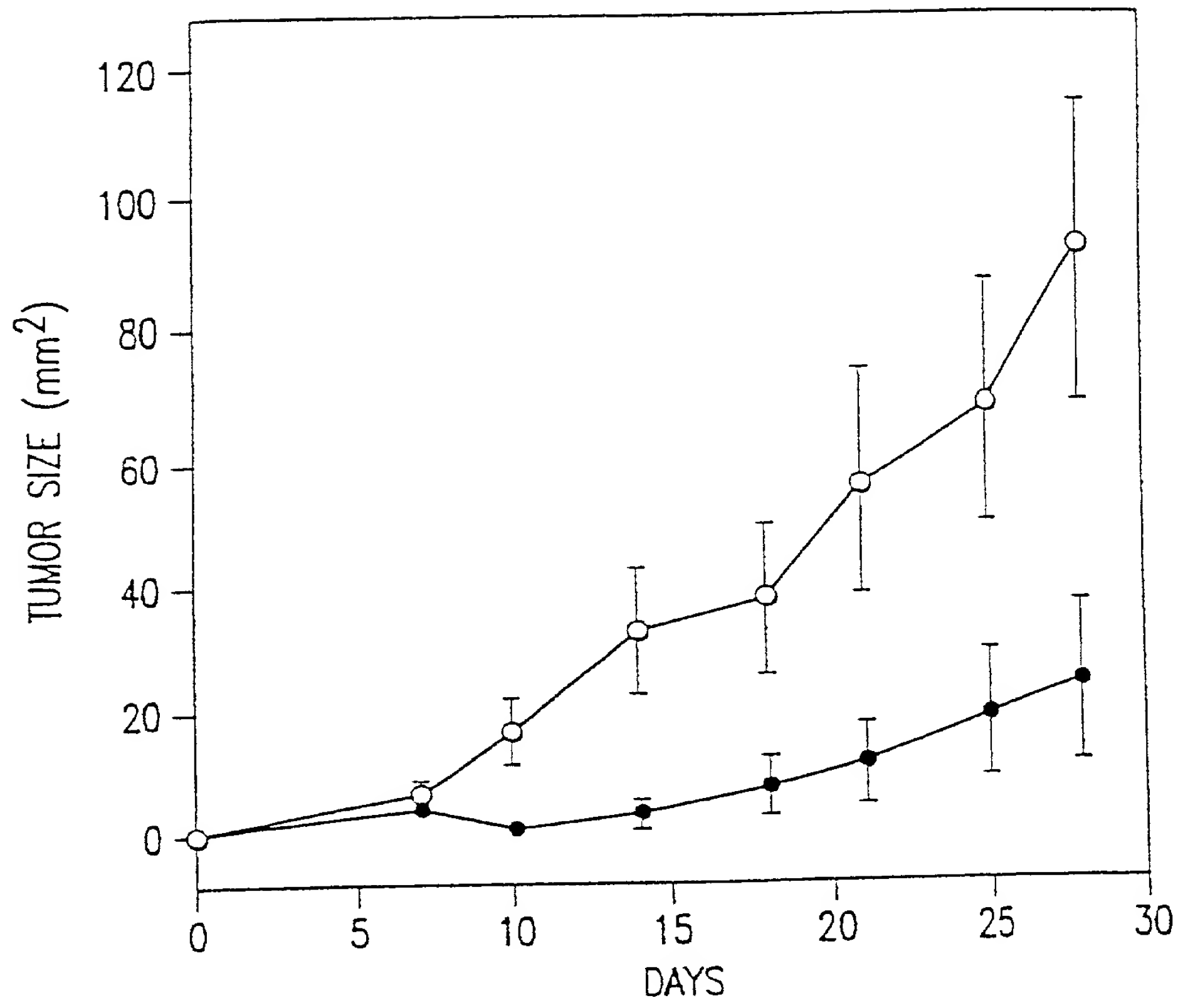


FIG. 16B

TNF-GAMMA POLYPEPTIDE ANALYSIS

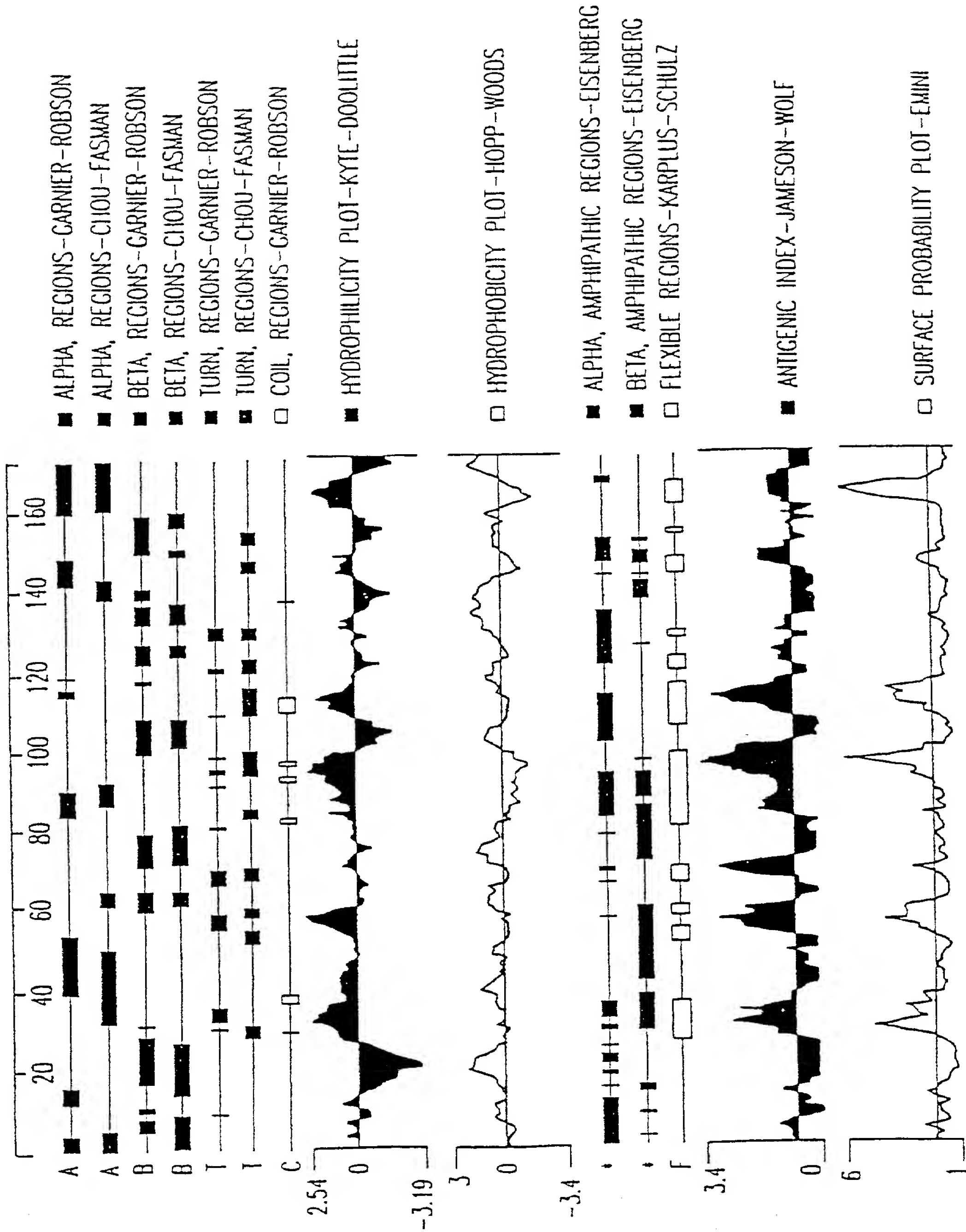


FIG. 17

TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-alpha 1 CCCAATCAAGAGAAATTCCATACTATCACCAGTTGGCCGACTTTCCAAG 49
 TNF-gamma-alpha 50 TCTAGTGCAGAAATCCAAGGCACCTCACACCTAGAGTTCCTATACCTCTG 99
 TNF-gamma-alpha 100 AGACTCCAGAGGAAAGAACAAGACAGTGCAGAAGGATATGTTAGAACCCA 149
 TNF-gamma-alpha 150 CTGAAAACCTAGAAGGTTGAAAAGGAAGCATACCCTCCTGACCTATAAGA 199
 TNF-gamma-alpha 200 AAATTTTCAGTCTGCAGGGGGATATCCTTGTTGCCCAAGACATTGGTGTT 249
 TNF-gamma-alpha 250 ATCATTTGACTAAGAGGAAATTATTTGTGGTGAGCTCTGAGTGAGGATTA 299
 TNF-gamma-alpha 300 GGACCAGGGAGATGCCAAGTTTCTATCACTTACCTCATGCCTGTAAGACA 349
 TNF-gamma-alpha 350 AGTGTTTTGTTCGAATTGATGAATGGGGAGAAAACAGTTCAGCCAATCAC 399
 TNF-gamma-alpha 400 TTATGGGCACAGAATGGAATTTGAAGGGTCTGGTGCTGCCCTTGTCTATA 449
 TNF-gamma-alpha 450 CGTAAACAAGAGAGGCATCGATGAGTTTTATCTGAGTCAATTTGGGAAAGG 499
 TNF-gamma-alpha 500 ATAATTCTTGCACCAAGCCATTTTCCTAAACACAGAAGAATAGGGGGATT 549
 TNF-gamma-alpha 550 CCTTAACCTTCATTGTTCTCCAGGATCATAGGTCTCAGGATAAATTAAAA 599
 TNF-gamma-beta 1 ATGCGCCGAGGATCTGGGACTGAGCTTTGGGGAAACAGCCAGTGTGGAA 48
 TNF-gamma-alpha 600 ATTTTCAGGTGAGACCACTCAGTCTCAGAAAGGCAAAGTAATTTGCCCCA 649
 TNF-gamma-beta 49 ATGCTGCCAGAGCACGGCAGCTGCAGGCCCAAGGCCAGGAGCAGCAGCGC 98
 TNF-gamma-alpha 650 GGTCAGTACTGCAAGATGTTATTCTCTTTGAACAAATGTGTATGTCCAGT 699
 TNF-gamma-beta 99 ACGCTGGGCTCTCACCTGCTGCCTGGTGTGCTCCCTTCCTTGCAGGAC 148
 TNF-gamma-alpha 700 CACATATTCTTCATTCACTCTCCCAAGCAGTTTTTTAGCTGTTAGGTA 749
 TNF-gamma-beta 149 TCACCACATACCTGCTTGTGAGCCAGCTCCGGGCCCAGGGAGAGGCCTGT 198
 TNF-gamma-alpha 750 TATTCGATCAGTTTAGTCTATTTTGAAAATGATATGAGACGCTTTTTTAAG 799
 TNF-gamma-beta 199 GTGCAGTTCCAGGCTCTAAAAGGACAGGAGTTTGCACCTTCACATCAGCA 248

FIG. 18A

TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-alpha	800	CAAAGTCTACAGTTTCCCAATGAGAAAATTAATCCTCTTTCTTGTCTTTC	849
TNF-gamma-beta	249	AGTTTATGCACCTCTTAGAGCAGACGGAGATAAGCCAAGGGCACACCTGA	298
TNF-gamma-alpha	850	CAGTTGTGAGACAAACTCCCACACAGCACTTTAAAAATCAGTTCCCAGCT	899
TNF-gamma-beta	299	CAGTTGTGAGACAAACTCCCACACAGCACTTTAAAAATCAGTTCCCAGCT	348
TNF-gamma-alpha	900	CTGCACTGGGAACATGAAC TAGGCCTGGCCTTCACCAAGAACCGAATGAA	949
TNF-gamma-beta	349	CTGCACTGGGAACATGAAC TAGGCCTGGCCTTCACCAAGAACCGAATGAA	398
TNF-gamma-alpha	950	CTATACCAACAAATTCCTGCTGATCCCAGAGTCGGGAGACTACTTCATT	999
TNF-gamma-beta	399	CTATACCAACAAATTCCTGCTGATCCCAGAGTCGGGAGACTACTTCATT	448
TNF-gamma-alpha	1000	ACTCCCAGGTCACATTCCGTGGGATGACCTCTGAGTGCAGTGAAATCAGA	1049
TNF-gamma-beta	449	ACTCCCAGGTCACATTCCGTGGGATGACCTCTGAGTGCAGTGAAATCAGA	498
TNF-gamma-alpha	1050	CAAGCAGGCCGACCAAAACAAGCCAGACTCCATCACTGTGGTCATCACCA	1099
TNF-gamma-beta	499	CAAGCAGGCCGACCAAAACAAGCCAGACTCCATCACTGTGGTCATCACCA	548
TNF-gamma-alpha	1100	GGTAACAGACAGCTACCCTGAGCCAACCCAGCTCCTCATGGGGACCAAGT	1149
TNF-gamma-beta	549	GGTAACAGACAGCTACCCTGAGCCAACCCAGCTCCTCATGGGGACCAAGT	598
TNF-gamma-alpha	1150	CTGTATGCGAAGTAGGTAGCAACTGGTTCCAGCCCATCTACCTCGGAGCC	1199
TNF-gamma-beta	599	CTGTATGCGAAGTAGGTAGCAACTGGTTCCAGCCCATCTACCTCGGAGCC	648
TNF-gamma-alpha	1200	ATGTTCTCCTTGCAAGAAGGGGACAAGCTAATGGTGAACGTCAGTGACAT	1249
TNF-gamma-beta	649	ATGTTCTCCTTGCAAGAAGGGGACAAGCTAATGGTGAACGTCAGTGACAT	698
TNF-gamma-alpha	1250	CTCTTTGGTGGATTACACAAAAGAAGATAAAACCTTCTTTGGAGCCTTCT	1299
TNF-gamma-beta	699	CTCTTTGGTGGATTACACAAAAGAAGATAAAACCTTCTTTGGAGCCTTCT	748
TNF-gamma-alpha	1300	TACTATAGGAGGAGAGCAAATATCATTATATGAAAGTCCTCTGCCACCGA	1349
TNF-gamma-beta	749	TACTATAGGAGGAGAGCAAATATCATTATATGAAAGTCCTCTGCCACCGA	798
TNF-gamma-alpha	1350	GTTCCCTAATTTTCTTTGTTCAAATGTAATTATAACCAGGGGTTTCTTGG	1399
TNF-gamma-beta	799	GTTCCCTAATTTTCTTTGTTCAAATGTAATTATAACCAGGGGTTTCTTGG	848
TNF-gamma-alpha	1400	GGCCGGGAGTAGGGGGCATCCACAGGGACAACGGTTTAGCTATGAAATT	1449
TNF-gamma-beta	849	GGCCGGGAGTAGGGGGCATCCACAGGGACAACGGTTTAGCTATGAAATT	897

FIG. 18B

TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-alpha 1450 TGGGG.CCAAAATTTACACTTTCATGTGCCTTACTGATGAGAGTACTAAC 1498
 ||||| ||||||||||||||||||||||||||||||||||||||||||||
 TNF-gamma-beta 898 TGGGGCCCAAAATTTACACTTTCATGTGCCTTACTGATGAGAGTACTAAC 947
 TNF-gamma-alpha 1499 TGGAAAAAGGCTGAAGAGAGCAAATATATTATTAAGATGGGTTGGAGGAT 1548
 ||||||||||||||||||||||||||||||||||||||||||||
 TNF-gamma-beta 948 TGGAAAAAGGCTGAAGAGAGCAAATATATTATTAAGATGGGTTGGAGGAT 997
 TNF-gamma-alpha 1549 TGGCGAGTTTCTAAATATTAAGACACTGATCACTAAATGAATGGATGATC 1598
 ||||||||||||||||||||||||||||||||||||||||||||
 TNF-gamma-beta 998 TGGCGAGTTTCTAAATATTAAGACACTGATCACTAAATGAATGGATGATC 1047
 TNF-gamma-alpha 1599 TACTCGGTCAGGATTGAAAGAGAAATATTTCAACACCTCCCTGCTATAC 1648
 |||||||||||||||||||||||||||||||||||||||| ||||||||
 TNF-gamma-beta 1048 TACTCGGTCAGGATTGAAAGAGAAATATTTCAACACCTTCCTGCTATAC 1097
 TNF-gamma-alpha 1649 AATGGTCACCAGTGGTCCAGTTATTGTTCAATTTGATCAATAAATTTGCTT 1698
 ||||||||||||||||
 TNF-gamma-beta 1098 AATGGTCACCAGTGGTCCA 1116
 TNF-gamma-alpha 1699 CAATTCAGGAGCTTTGAAGGAAGTCCAAGGAAAGCTCTAGAAAACAGTAT 1748
 TNF-gamma-alpha 1749 AAACTTTCAGAGGCCAAATCCTTCACCAATTTTCCACATACTTTCATGC 1798
 TNF-gamma-alpha 1799 CTTGCCTAAAAAAATGAAAAGAGAGTTGGTATGTCTCATGAATGTTTAC 1848
 TNF-gamma-alpha 1849 ACAGAAGGAGTTGGTTTTTCATGTCTACAGCATATGAGAAAACCTACC 1898
 TNF-gamma-alpha 1899 TTTCTTTTGATTATGTACACAGATATCTAAATAAGGAAGTTTGAGTTTCA 1948
 TNF-gamma-alpha 1949 CATGTATATCCCAAATACAACAGTTGCTTGTATTTCAGTAGAGTTTTCTTG 1998
 TNF-gamma-alpha 1999 CCCACCTATTTTGTGCTGGGTTCTACCTTAACCCAGAAGACACTATGAAA 2048
 TNF-gamma-alpha 2049 AACAAGACAGACTCCACTCAAATTTATATGAACACCACTAGATACTTCC 2098
 TNF-gamma-alpha 2099 TGATCAAACATCAGTCAACATACTCTAAAGAATAACTCCAAGTCTTGGCC 2148
 TNF-gamma-alpha 2149 AGCGGCAGTGGCTCACACCTGTAATCCCAACACTTTGGGAGGCCAAGGTG 2198
 TNF-gamma-alpha 2199 GGTGGATCATCTAAGCGCGGAGTTCAAGACCAGCCTGACCAACGTGGAG 2248

FIG. 18C

TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-alpha 2249 AAACCCCATCTCTACTNAAAATACNAAATTAGCCGGCGTGGTAGCGCAT 2298
TNF-gamma-alpha 2299 GGCTGTAANCCTGGCTACTCAGGAGCCCGAGGCAGAANAATTNCTTGAAC 2348
TNF-gamma-alpha 2349 TGGGGAGGCAGAGGTTGCGGTGAGCCCAGANCGCGCCATTGCACTCCAGC 2398
TNF-gamma-alpha 2399 CTGGTAACAAGAGCAAACTCTGTCCAAAAAAAAAAAAAAAAAAAA 2442

FIG. 18D

TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-beta 1 MAEDLGLSFGETASVEMLPEHGSCRPKARSSSARWALTCCLVLLPFLAGL 50
 TNF-gamma-alpha 1 MRRFLSKVYSFPMRKLILFLVFP 23
 TNF-gamma-beta 51 TTYLLVSQLRACGEACVQFQALKGQEFAPSHQQVYAPLRADGDKPRAHLT 100
 TNF-gamma-alpha 24 VVRQTPTQHFKNQFPALHWEHELGLAFTKNRMNYTNKFLLIPESGDYFIY 73
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||
 TNF-gamma-beta 101 VVRQTPTQHFKNQFPALHWEHELGLAFTKNRMNYTNKFLLIPESGDYFIY 150
 TNF-gamma-alpha 74 SQVTFRGMTSECSEIRQAGRPNKPDSTITVWITKVTDTYPEPTQLLMGTKS 123
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||
 TNF-gamma-beta 151 SQVTFRGMTSECSEIRQAGRPNKPDSTITVWITKVTDTYPEPTQLLMGTKS 200
 TNF-gamma-alpha 124 VCEVGSNWFQPIYLGAMFSLQEGDKLMNVSDISLVDTKEDKTFFGAFL 173
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||
 TNF-gamma-beta 201 VCEVGSNWFQPIYLGAMFSLQEGDKLMNVSDISLVDTKEDKTFFGAFL 250
 TNF-gamma-alpha 174 L 174
 |
 TNF-gamma-beta 251 L 251

FIG. 19

TNF-gamma-beta

1	ATGGCCGAGGATCTGGGACTGAGCTTTGGGGAAACAGCCAGTGTGGAATGCTCCCAGAG	60
1	M A E D L <u>G L S F G</u> E T A S V E M L P E	20
61	CACGGCAGCTGCAGCCCCAAGGCCAGGAGCAGCAGCGCACGCTGGGCTCTCACCTGCTGC	120
21	H G S C R P K A R S S S A R W <u>A L T C C</u>	40
121	CTGGTGTGCTCCCTTCCTTGCAGGACTCACCACATACCTGCTTGTACGCCAGCTCCGG	180
41	<u>L V L L P F L A G L T T Y L L V S Q L R</u>	60
181	GCCCAGGGAGAGGCCTGTGTGCAGTTCCAGGCTCTAAAAGGACAGGAGTTTGCACCTTCA	240
61	<u>A</u> Q G E A C V Q F Q A L K G Q E F A P S	80
241	CATCAGCAAGTTTATGCACCTCTTAGAGCAGACGGAGATAAGCCAAGGGCACACCTGACA	300
81	H Q Q V Y A P L R A D G D K P R A H L T	100
301	GTTGTGAGACAACTCCCAACAGCACTTTAAAAATCAGTCCCAGCTCTGCACTGGGAA	360
101	V V R Q T P T Q H F K N Q F P A L H W E	120
361	CATGAAGTGGCCTGGCCTTACCAAGAACCGAATGAAGTATACCAACAAATTCCTGCTG	420
121	H E L <u>G L A F T K</u> N R M N Y T N K F L L	140
421	ATCCCAGAGTCGGGAGACTACTTCATTTACTCCCAGGTCACATTCCGTGGGATGACCTCT	480
141	I P E S G D Y F I Y S Q V T F R G M T S	160
481	GAGTGCAGTGAAATCAGACAAGCAGGCCGACCAACAAGCCAGACTCCAATCACTGTGGTC	540
161	E C S E I R Q A G R P N K P D S I T V V	180
541	ATACCAAGGTAACAGACAGCTACCCTGAGCCAACCCAGCTCCTCATGGGACCAAGTCT	600
181	I T K V T D S Y P E P T Q L L M G T K S	200
601	GTATGCGAAGTAGGTAGCAACTGGTTCCAGCCCATCTACCTCGGAGCCATGTTCTCCTTG	660
201	V C E V G S N W F Q P I Y L <u>G A M F S L</u>	220
661	CAAGAAGGGGACAAGCTAATGGTGAACGTACGTACATCTCTTTGGTGGATTACACAAA	720
221	Q E G D K L M V N V S D I S L V D Y T K	240
721	GAAGATAAAACCTTCTTTGGAGCCTTCTTACTATAGGAGGAGAGCAAATATCATTATATG	780
241	E D K T F F G A F L L	251
781	AAAGTCCTCTGCCACCGAGTTCTTAATTTTCTTTGTTCAAATGTAATTATAACCAGGGGT	840
841	TTTCTTGGGCGGGAGTAGGGCCATTCCACAGGGACAACGGTTTAGCTATGAAATTGG	900

FIG. 20A

TNF-gamma-beta

901 GGCCCAAATTCACACTTCATGTGCCTTACTGATGAGAGTACTAACTGGAAAAAGGCTG 960
961 AAGAGAGCAAATATATTATTAAGATGGGTGGAGGATTGGCGAGTTTCTAAATATTAAGA 1020
1021 CACTGATCACTAAATGAATGGATGATCTACTCGGGTCAGGATTGAAAGAGAAATATTTCA 1080
1081 ACACCTTCCTGCTATACAATGGTCACCAGTGGTCCA 1116

FIG. 20B